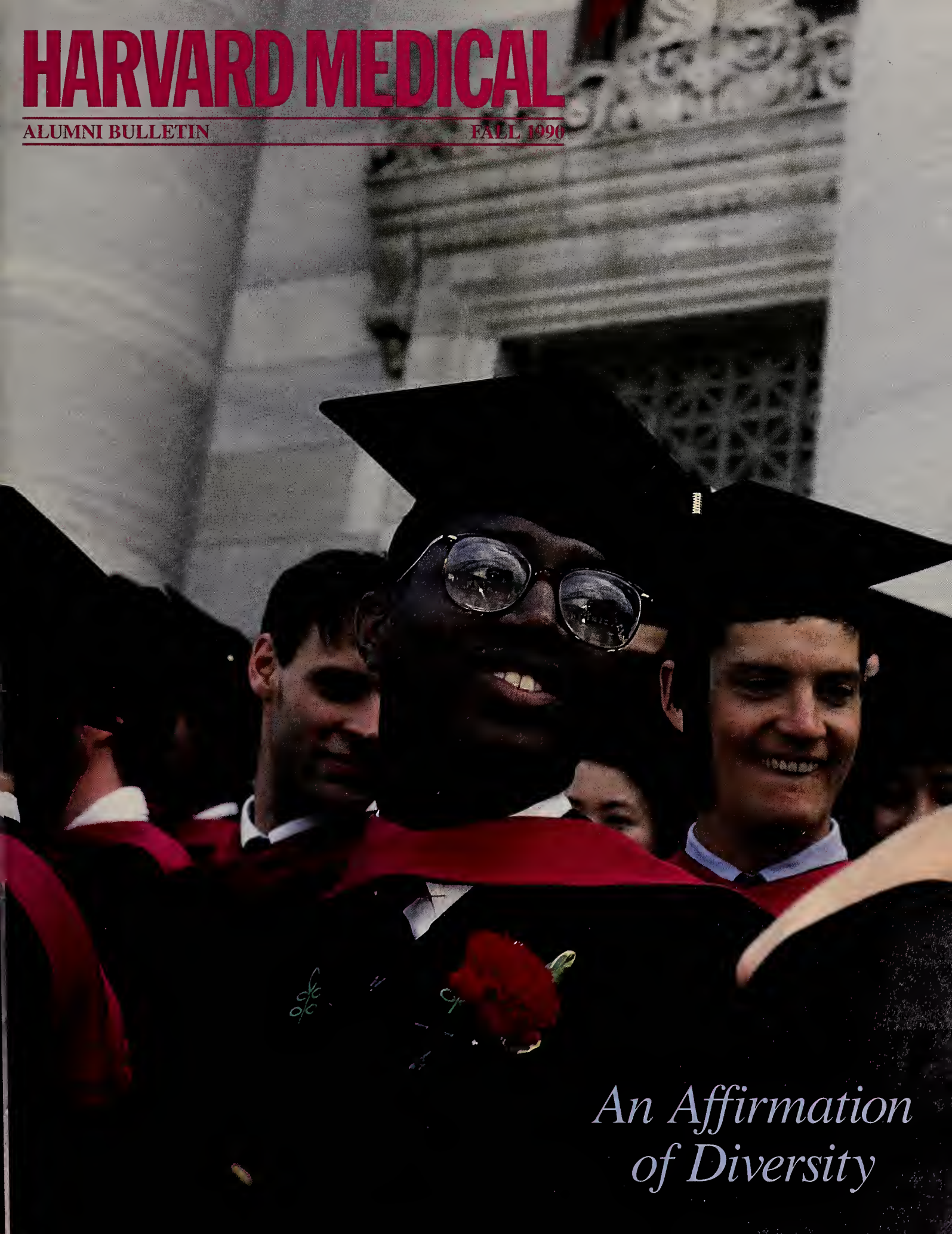


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ALUMNI BULLETIN

FALL 1990



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INSIDE H.M.A.B.

To no one's surprise, Alumni Day and Class Day happened again this June, but this year the nostalgia, the accumulated wisdom, and the promise for the future had a special meaning—the 20th anniversary of affirmative action, Harvard's eternal struggle for human rights.

Leon Eisenberg, one of its active protagonists for these 20 years and still its articulate spokesperson, provides an inside account of how things were, then arguments and rhetoric, the problems and misunderstandings at the beginning. Emilio Carrillo '76 and Woody Myers '77, demonstrably successful products of affirmative action, speak thoughtfully about their careers from positions as leaders of health care in New York City.

Class Day on Thursday followed the recently established tradition: two speakers chosen by the graduating class and two members of that class. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, argued the case for science and medicine. Lewis First '80 offered some good advice to the graduating class on what to do next. Daveed Frazier and Benjamin Scheindlin brought us up to date on what the undergraduates are thinking—generally favorable thoughts.

Alumni Day, as has become the custom, was given over to the 25th-year class, HMS '65. With Jim Nelson presiding, Tom Smith, who devoted this last year to the Council of Academic Societies, described the New Pathway; Bob Trelstad succeeded in making pathology and autopsies a lively topic; Edward Scolnick of Merck helped us brush up our enzymes.

Mixed in with this group of experts, the *Bulletin* is privileged to publish the Alumni Prize Essay, a superb and poignant study by Eileen Reynolds '90 of the patient/student relationship—the human side of patient/doctor teaching, so important in the New Pathway.

As this issue goes to press, we must record our sense of loss in the passing of Bill Castle, Class of 1921, surely one of Harvard's immortals.

—Gordon Scannell

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ALUMNI BULLETIN

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ALUMNI COUNCIL: PRESIDENT'S REPORT

Financially-Stressed Students

by Robert M. Goldwyn

In this centennial year of the Harvard Medical School Alumni Association, the Alumni Council is engaged in activities whose scope and diversity would have undoubtedly amazed and hopefully pleased its founders. That the composition of the medical school classes, and therefore of the council, includes women would likely provoke a few extra systoles in that small group of "gentlemen" who gathered because they thought that the medical school needed an association of alumni.

My predecessor and classmate, Claire Stiles '56, in her presidential report described the ongoing work of the Survey Committee under the very able and active leadership of Langdon Burwell '44. More than 1,000 of the slightly more than 1,500 alumni polled returned their questionnaires—an unusually high response rate. The results will be reported and discussed in detail during Alumni Week 1991. You will also be receiving information concerning the 100th birthday celebration of the Alumni Association. Nina Tolkoff Rubin '68 and her Centennial Planning Committee have already arranged many imaginative events.

What I would like to communicate here is what also concerned the founders of the Alumni Association in 1891: the plight of the financially stressed student. It is interesting to note that one of the association's earliest activities was to raise money to help a few poor students (also veterans, interns and young professors!). Unfortunately, the same problem remains today, but its dimensions are of agonizing proportions.

The Alumni Association—and of course, the alumni through its traditional donations, particularly for the annual drive—has not only been concerned about the financial burdens of students, but has done something about it. To become a good doctor—or even a bad doctor—it is necessary first to become a doctor. This opportunity, the Alumni Council strongly feels, should

not be denied to a poor student, who is otherwise a top candidate. In an effort to address that concern the council established the Committee on Student Financing, chaired by Nancy A. Rigotti '78. Participants include Cecil A. Cogins '58, Robert G. Gluhly '62, chairman of the HMS Student Financial Aid Committee, Daniel D. Federman '53, Paula A. Johnson '85, and Theresa J. Orr, assistant dean for student affairs.

Orr, who oversees financial aid to students, has stated that 78 percent of the June 1990 graduates were indebted, with debts ranging from \$2,500 to \$142,000 and the average being \$47,357. Over 30 percent of these borrowers owe more than \$60,000. While this group of borrowers is not the majority, its numbers are challenging and give us cause for concern.

A graduate with a typical \$66,000 portfolio of loans would be obliged to pay \$950 per month beginning in the middle of PGY3. That borrower could postpone payments until the end of residency, but with interest accrual, monthly payments would increase to \$1,150. Total payback over 10 years would amount to more than \$138,000—more than twice the original principal.

The tuition at Harvard Medical School, as at every medical school, has increased significantly in the past few years. Students beginning at HMS this fall will face a tuition cost of \$18,000, with average increases of 7 percent expected each year. The average total cost of attendance for 1990–91 at HMS—which includes tuition, living expenses, books, etc.—is \$32,000. This price tag presents a financial Mt. Everest for every student and his or her family, but especially for students from lower income backgrounds, who are more fearful of accumulating large debts.

Some who are admitted are dissuaded from entering because of the price and the expected debt. State schools are often the alternative for a

number of these students. Others are attracted to the few schools that offer financial incentives to preferred applicants.

The Committee on Student Financing will be looking into the possibilities for reducing students' debt burden. These ideas range from assisting the monthly loan payments for overburdened graduates to supporting the new HMS plan to create a program of research assistantships for undergraduate medical students.

The latter initiative is slated to be inaugurated in the coming year. The selected research assistants are to receive stipend and partial tuition credit, which will enable them to reduce the loan portion of their financial aid. Orr is enthusiastic about the creation of this new program, which she describes as "the glove that fits over the hand of the new curriculum."

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"Providing students the opportunity to learn research skills and improve analytical reading competence encourages that lifelong learning, which our new curriculum promotes," she says. "It is exciting that this opportunity can at the same time benefit the student's debt management." Alumni can support this new endeavor by individual contributions, and by offering themselves as research sponsors.

Orr does not restrict her activities to students. She is concerned, as are the medical school and the Alumni Association, with the financial burdens during residency and beyond. In her

report to the Alumni Council she recommended that HMS alumni in faculty positions be attuned to financially-stressed residents, who might be difficult and embarrassed to seek our help and advice.

She mentioned a few ideas for alumni in faculty positions across the country to consider: 1) Hospital residency programs could offer a student loan repayment grant as a financial incentive to attract residents, as is being done at a few other hospitals; 2) Hospitals could present financial planning seminars targeted to residents; 3) Residency program directors

could open the way for a program of "scheduled moonlighting," in recognition of the fact that most residents need to supplement their incomes.

You can be assured that the Alumni Council will be unrelenting in its efforts to reduce the financial indebtedness of students. We welcome your thoughts and suggestions on this or any other matter you wish to bring to our attention. □

Robert M. Goldwyn '56 is clinical professor of surgery at HMS, and head, Division of Plastic Surgery at Beth Israel Hospital.

LETTERS

A Different Kind of Teacher

Many years and two deans ago, I penned a modestly irreverent screed for these pages. I was concerned at the time with the type of person who would be chosen to replace George Packer Berry and fantasized an extravaganza of public nominations that were to culminate in a full-fledged corona-

tion. Your latest issue (Spring '90) brings me the very sad news of Tom Wright's death, and my fondest hope is that Harvard Medical School's choice of a successor to this rare and noble man will be as solemn an undertaking as the one that eventually brought us Drs. Ebert and Tosteson.

In the early 1960s many of us were feeling a vast disappointment that much of what we had come to Harvard Medical School to discover just wasn't there. The portraits of those stern and ermined Harvard greats, which decked every auditorium wall, had promised a legacy that was beginning to look about as substantive as oil on canvas. Overly-focused summer research projects, and the fragmentation of a curriculum that was supposed to bring things together were hardly inspiring developments. Most of our lecturers, apostrophizing this way and that with phrases from the legendary Peabody Lecture, seemed to be lacking in basic moral fiber, let alone towering moral stature.

At a time in our lives when we needed and often asked for structure and consistency and, well, a validation of the profession we had undertaken, all of these things were missing. And then, into the midst of indifference and anonymity, a spark of institutional wisdom deposited Tom Wright.

I can't recall a single vague or eva-

nescent thing about this man—he was pure flesh, mostly heart. Humor without guile, wisdom without craftiness, poise and bearing without stagecraft. And courteous to a fault. He was so consistent in all these things that his behavior could only be a reflection of how kindly he felt toward his fellow human beings. His sense of right and wrong was simple but solid, and the gentle way he pronounced on our own little problems was as good a course in ethics as Harvard is ever likely to offer.

In fact, a lot of plain things come to mind when I think of him; nothing so trite as "a simple life well lived," mind you. He was too complex—had too many well-adorned compartments for that designation—and he lived his life superbly, not just "well." I mean plain things like the old bedrock standards of truthfulness, honor, dependability and the willingness to share himself with all manner of creature.

I see him now as clearly as ever, presiding like some belted but still informal earl in his walled-off Vanderbilt fiefdom. Natty and ever-so-respectable in spite of his old sport coat, out-of-date, horn-rimmed glasses, and a knotted tie that could have passed for a horse collar. He had probably been hired to protect dormitory property and chastity, but I think his real objective was to protect and

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Information and application forms may be obtained from:

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promote our sense of self-worth.

There couldn't have been any among us who didn't have second thoughts about our commitment to a career that seemed hopelessly demanding, one that was receding ever further into the distance even as we struggled to approach it. I don't think Tom Wright ever had the slightest doubt that we had embarked upon the greatest career path imaginable and, in all sorts of ways, he continually reinforced our aspirations. I don't remember a single time when he failed to take us seriously.

Tom Wrighteous? Hardly. (Though he'd still get my vote for a minor sainthood.) He was wise to all our peccadillos and, even as he chronicled them in his notorious cartography, he knew when to look the other way. Our apprenticeship was a perilous passage and he administered just the right doses of discipline, admonition, tolerance and occasional admiration for what was afoot in those many private rooms. And I'm one of hundreds who know firsthand that Tom's interest in us didn't flag after graduation. He continued to chart the exploits of many of our class—heroes and outlaws—for well over a decade.

Others were more formally charged with our education, but these were often people who lacked the time or interest to spot a flagging spirit or note that a student was losing sight of the objective. At those critical junctures, Tom would appear and work his cures. If we floundered in the microthings of dissected human bone and behavior, his person, style and wry observations would always rescue us with reminders of how really simple the true work of a healer would always be.

We all mattered greatly to Tom and it was always clear, without his ever having said it, that his mission was to contribute something toward our education as physicians. I'm sure nobody who knew him needs to be reminded of how well he succeeded. There will always be a lot to Tom Wright in how Jim Kahn practices medicine and I'll always be grateful that I was able to thank him for that so many times over the years.

Ars longa, Tom. And veritas.

—James B. Kahn '67

Erratum

The *Bulletin* regrets that three names were misspelled in a "Pulse" report on the HMS African-American exhibition at Widener Library. The correct spellings are: Martin R. Delany, James Q. Trimble and Daniel Laing.

PULSE

Choice Faculty

Students singled out six HMS faculty members for teaching awards this year.

Charles J. Hatem '66, assistant professor of medicine, received the first Leo Blacklow Teaching Award, established to honor a teacher who holds appointments at HMS and Mt. Auburn Hospital. Hatem is director of medical education at Mt. Auburn Hospital, and has been actively involved in molding the New Pathway curriculum. Leo Blacklow '30 practiced and taught at Mt. Auburn Hospital for over 50 years.

Booker T. Bush, instructor in medicine, received the S. Robert Stone Award for Teaching at Beth Israel Hospital. He was described by one student as "giving a great deal of time and thoughtful, intelligent reflection" to his teaching duties.

In addition to these awards, the annual Excellence in Teaching awards

were presented to outstanding instructors in each of the four years of medical school training. David A. Begg, associate professor of anatomy and cellular biology, received the first-year teaching



Leo Blacklow and Charles Hatem



Excellence in Teaching awards went to (front, l-r) David Begg, Carolyn Compton, (back, l-r) Shahram Khoshbin, and James Breeling.



Booker T. Bush

prize. An instructor in histology, he was noted for his ability to foster an exceptional learning environment. Said one student, "After hundreds of teaching sessions during the first year, none are more memorable than those with Dr. Begg."

Carolyn C. Compton '74, assistant professor of pathology, the second-year awardee, is a pathology lab instructor in Human Systems, and will be the pathology coordinator for the entire course next year. "Her warmth and unbelievable enthusiasm were truly inspiring and made learning exciting," wrote one student.

The third-year awardee is Shahram Khoshbin, assistant professor of neurology. Khoshbin has been course director of the core clerkship in Neurology at Brigham and Women's Hospital since 1988. As one student wrote: "Dr. Khoshbin is a role model as a clinician/researcher who speaks enthusiastically about both patient care and academic pursuits."

James L. Breeling, instructor in medicine, is the fourth-year prize winner. Breeling is course director and lecturer for the Infectious Diseases elective. He was praised for his expert organization of a difficult course. □

Alumni Association to Celebrate Centennial

One hundred years ago, on November 26, 1890, a group of HMS graduates met over dinner at the Boston Medical Library and decided to form an alumni association. To celebrate the 100-year milestone, the Alumni Council is sponsoring a series of events throughout the academic year 1990/91.

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1864.	FRANCIS MINOT WELD, Storey Pl., Jamaica Plain, Mass.

The first officers of the HMS Alumni Association, including a partial listing of the councillors.

"The alumni are an enduring part of the Harvard Medical School family," says Daniel Federman, dean for medical education. The medical school celebrated the bicentennial of its conceptualization in 1982, but it took about 100 years from the time the first three men graduated in 1789 for the alumni association to be conceptualized. Now, 100 years after that idea, "We think it is a good time to celebrate."

The kick-off event, on Saturday, October 27, is "A Morning in the New

Pathway." Alumni are invited to experience firsthand the New Pathway style of teaching. Experiencing in condensed form the process by which HMS students now learn, participants will hear a lecture on pleasure and the brain by David Potter, professor of neurobiology, and then break into tutorial groups to discuss actually-used cases related to the lecture topic. Also planned are demonstrations of new educational techniques, a tour of the Medical Education Center, and lunch in Vanderbilt Hall.

"You can hear about the New Pathway, but the real excitement is to feel it," says Federman. "Not only is this program a wonderful opportunity, but I also think it reflects the thought that medicine is a permanent educational commitment."

The council's Centennial Planning Committee, chaired by Nina Tolkoff Rubin '68, is also planning a formal dinner on Saturday, January 26 in Vanderbilt Hall. At this function alumni and current students will re-dedicate Vanderbilt, which has been closed for renovations the past academic year.

The celebration will conclude during alumni week 1991 with a symposium at which the results of the Alumni Council's survey on physician satisfaction will be presented, and the future directions of medicine analyzed. Also to coincide with the centennial, an updated alumni directory and a history of the Harvard Medical Alumni Association will be published. □

Spellman Retires as Dean for Medical Services

Mitchell Spellman, MD, PhD is retiring as dean for medical services, though he will continue to serve as the school's international "ambassador" part time as dean *emeritus* for international projects. A retirement reception was held in his honor on May 31.

Spellman's international role includes working with overseas medical schools, hospitals and health-related



Mitchell Spellman



Herbert Benson teaches relaxation techniques to Charlotta Pawlowsky-Flodell.

agencies with which HMS already has links, as well as forging new ones. He will continue to host foreign dignitaries who visit the medical school.

Under his leadership of the Office for International Medical Programs, agreements thus far have been made with seven institutions, either for training or research exchanges, or for HMS faculty to consult in academic planning and institution-building.

Exchange programs are under way with medical schools in Pakistan, China, Taiwan, France, the United Arab Emirates, Oman and Saudi Arabia. Institution-building arrangements have included training Saudi Arabian physicians as specialists, developing training and research initiatives with Aga Khan University Hospital and Medical College, designing courses, and recruiting and developing faculty for the United Arab Emirates at Al Ain and Sultan Qaboos University in Oman.

Spellman's domestic duties as dean for medical services will be divided among other deans: Eleanor Shore '55, David Bray and James Adelstein '53. These responsibilities include oversight of relationships with the Harvard-affiliated hospitals, with the clinical departments, and with government and community bodies and organizations.

Spellman came to HMS in 1978 from Los Angeles, where he was dean of Charles R. Drew Postgraduate Medical School and professor of surgery at UCLA. His MD is from Howard University and his PhD, from the University of Minnesota. □

Just Relax

The recently established Mind/Body Medical Institute gives new meaning to the term "R & R." The institute puts the relaxation response to work for a variety of disorders ranging from stress to discomfort caused by cancer therapies.

The institute is an extension of research begun over 20 years ago by Herbert Benson '61, now the chief of the New England Deaconess Hospital section on behavioral medicine. A two-day symposium and dinner in May celebrated the inauguration of the institute, established to continue the use of the relaxation response on new patient populations and to advance research on the method's long-term effects.

The relaxation response is elicited by deep breathing, and clearing one's mind and focusing on one word or prayer for 10 to 20 minutes twice a day.

In conjunction with other medical therapies, the method has been successful in lowering high blood pressure and reducing stress, treating infertility in women, and decreasing the severity of pain felt by AIDS and cancer patients.

Benson, associate professor of medicine at HMS, began his work in behavioral medicine in 1967 in Clifford Barger's (HMS '43A) laboratory. Benson traces the intellectual lineage of his work to Walter B. Cannon's theories on the fight-or-flight response; now Benson has focused on the body's opposite reaction—relaxation.

Norepinephrine and epinephrine

produce the increase in the body's heart rate, blood pressure, respiratory rate, muscle blood flow and metabolism that prepare an individual for fighting or fleeing. Benson coined the term relaxation response to describe the state of quieting norepinephrine.

"Insofar as stress is a contributor to discomfort or to health status, the reduction of stress through behavioral strategies is good medicine," says Benson. "With its emphasis tilting towards self-care, it also offers a way to reduce some of the medications patients take, as well as some of the costs of care." □

CAMPAIGN REPORT

Campaign Commendations

With 18 months remaining in the Campaign for the Third Century of Harvard Medicine, its co-chairman, Colman Mockler Jr., says he is pleased with its progress and foresees the effort exceeding its goal of \$185 million. Mockler's remarks came in his latest bi-annual progress report to the National Campaign Committee at its May meeting.

Mockler, who has chaired the campaign since it began in October 1986, noted that "every one of my progress reports has been a pleasure to convey because the news has always been that of successes." In a remark that drew

On May 24, emeritus faculty members again enjoyed a reunion luncheon. This year's featured speaker was Fred Jakobiec '68, chief of ophthalmology at Mass. Eye and Ear, who presented a lively talk on research in progress on retinal transplantation (left). Pictured below is T. Carl Jones and Edward Edwards.



Colman Mockler

applause from the gathering, he attributed the success not to his own chairmanship but to the leadership of Daniel C. Tosteson '48, dean of the faculty of medicine, and to the volunteers—alumni, faculty and friends of the school whom the dean has recruited to assist with the effort.

"There are many other factors but I am convinced that the most important is the leadership of Dan Tosteson. He has been tireless in his efforts to improve the quality of education, provide

an environment in which research can thrive, anticipate the needs of society in health and social issues in which medicine is involved and meet with those corporations, foundations and individuals who have the ability to contribute to the needs and future of the school."

Mockler, who heads the Boston-based Gillette Company and is one of seven members of the Harvard Corporation, acknowledged that the success was also due to the "mission and reputation of Harvard Medical School, which is such that volunteers find there is no need to 'sell' the school to prospects."

Mockler recognized the achievements of the Alumni Fund, under the direction of Joseph E. Murray '43B, and noted that alumni have provided the school with the highest percentage of annual giving participation among all American medical schools. Murray also received kudos for increasing the annual participation of alumni who have graduated since 1980 by establishing a program that matches first-time contributions dollar for dollar. A part of the matching funds has even come from Murray himself.

Mockler also credited Murray and Tosteson with the success of the dean's council program. Since the creation of the program at the start of the campaign, said Mockler, the council's membership has increased steadily each year. This year it boasts over 300 members, each of whom has donated \$1,000 or more for unrestricted use.

Mockler also announced that the number of Third Century Fellows—individuals who have contributed \$50,000 or more to the campaign, either outright or by bequest—has increased to 168.

Mockler credited Perry J. Culver '41 and Daniel D. Federman '53, co-chairmen of the National Alumni Committee, for their work on the alumni regional campaign program. He injected a tidbit of Harvard history by

noting that the program took its cue from the original Vanderbilt Hall Campaign, which alumni conducted in the 1920s by forming committees in nearly every major American city to help raise money for the construction of Vanderbilt Hall.

In the current regional campaign reported Mockler, alumni have formed committees in Philadelphia, Los Angeles, San Diego, Boston, New York, Baltimore, Washington, D.C., Chicago, North Carolina, Minneapolis, Atlanta, Florida's east and west coasts, Oregon and Seattle. Those campaigns have raised over \$3.5 million in support of Vanderbilt Hall's renovation, as well as for student financial aid and unrestricted funds. He also reported that two major efforts were slated for San Francisco and the Southern Bay Peninsula this fall.

Generosity of alumni support for the campaign was reflected in what has been raised to date Mockler noted. Of the \$162,291,000 that had been given or pledged to the effort as of May 15, \$46,810,000 came directly from alumni. Mockler said that the school expects to exceed its goal of \$52,000,000 in alumni contributions during the course of the campaign.

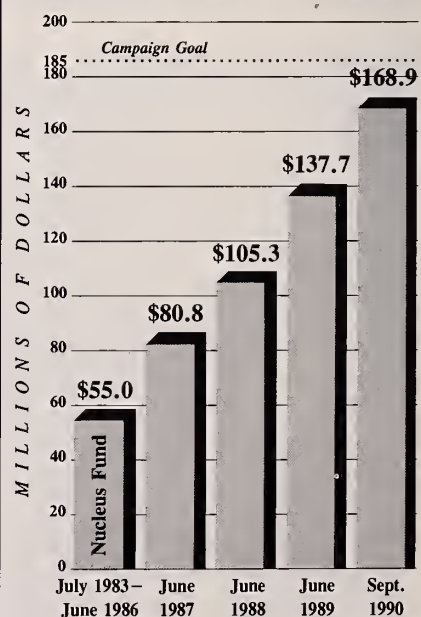
"But before we pat ourselves on the back," he continued, "let's take a look at what remains to be done."

Mockler said the school was having some difficulty in attracting new endowment funds for the basic sciences, and applauded efforts presently underway to boost the campaign total. Efforts cited were a wider appeal to alumni and clinical faculty to consider introducing charitably-inclined friends and patients to Harvard Medical School's basic science program. Mockler reported that individuals whom alumni have introduced to the school so far have contributed \$3.7 million in pledges and gifts. Individuals led to the school by faculty have contributed \$47.2 million in pledges and gifts to date.

"We do not ask you to solicit your present or former patients," Mockler said. "In fact, we ask that you not solicit. Experience has shown that the most effective way to secure gifts is by the process of introduction by a volunteer and then solicitation by a fund raiser. The staff of the Office for Resource Development, under Bill Stone, is prepared to travel and meet with any prospect you deem appropriate."

Mockler said that every alumnus and friend of the school could participate in the "process of scientific discovery at Harvard," either by making a pledge to the campaign's Funds for Discovery or by asking a friend or patient to pledge. "As part of the HMS family," he said, "each of us has the opportunity to participate in this work by helping to fund work in the basic sciences." □

Campaign for the Third Century of Harvard Medicine



The Campaign reached \$168.9 million in gifts and commitments as of September 1, 1990. The Campaign goal is \$185 million.

Celebrating Affirmative Actions

“For years, health-care professionals have talked about prevention. Now I want to make it a national crusade. I am working to develop a health-care ethic that makes prevention a personal priority for our citizens and a top priority for our nation.” On that note, Secretary of Health and Human Services Louis Sullivan, MD commenced a two-day celebratory retrospective of 20 years of affirmative action at HMS.

Reflection and introspection shaped the symposia on Wednesday and Thursday of Alumni Week, focusing on the history of affirmative action at HMS, the current status of minority students and faculty at the school, and the state of health care for minorities in the United States. “In Celebration of a Dream: 20 Years of Diversity at HMS” was organized by Edward A. Kravitz, PhD, George Packer Berry Professor of Neurobiology, and Paula A. Johnson ’85, a fellow in cardiology at Brigham and Women’s Hospital.

Twenty years was considered a good time to look back, forward, and to dispel old and lingering myths. Kravitz, one of those involved in initiating affirmative action procedures at the medical school in 1970, said that then, and still now, myths about the competency and intelligence of minority students were abundant. Now that

many of the graduates are 10 years or more into their careers, this celebration was intended to show what they have accomplished.

In his talk entitled “Medicine and Minorities in the Nation,” Sullivan addressed the growing disparity between the health of blacks and of whites in our country. Similar ideas were expressed by Woodrow Myers ’77, commissioner of public health in New York City, who praised the security and confidence Medicare has given the poor, but sounded a warning about the future state of health care as crack, AIDS, the threat of “disease-based discrimination,” and a lack of prenatal care for many poor, minority women begin to take hold.

Leon Eisenberg, MD, the Maude and Lillian Presley Professor of Social Medicine at HMS, presented an insider’s view of the HMS history of affirmative action, from its “abysmal” record of minority admissions before 1969 (2.7 percent of the total admissions to medical school in the 1968/69 academic year were black) to the increasingly positive statistics of today.

Formal history was speckled with the memories of alumni who were students at that time. Emilio Carrillo ’76, now president of New York City Health and Hospitals Corporation, described himself as “an angry young man”



Dean Daniel Tosteson '49 and U.S. Secretary of Health and Human Services Louis Sullivan, MD during the symposium.

when he entered HMS 18 years ago. He spoke about his experience walking out of a classroom in which the Tuskegee study was considered "not a bad thing epidemiologically." On another occasion, he and other students scheduled a meeting with Dean Ebert to demand a bio-social curriculum. They got to the meeting before the dean and, said Carrillo, "being the bold one in the group," he took the dean's chair. The dean came in and said, "Excuse me, that's my seat," to which Carrillo retorted, "I got here first."

Carrillo concluded that there are still struggles, maybe worse than 18 years ago, but today, "We're more sophisticated, focused and mature."

While history provided the chance to congratulate and celebrate, the necessity to also contemplate today's struggles was never out of sight. As Debra Prothrow-Stith '79 aptly said in her talk, "From Medical Student to Medical Professional," "A celebration is appropriate when good work has been done. Harvard, you have done good work. This celebration is appropriate not to signal the end of our work, but to fit us for the struggle of the next 20 years."

Inherent in that struggle is a lack of mentors for minority students, hindered by a small number of minority professors at HMS—a problem Kravitz says could be easily alleviated by the school's hiring from among the 300 to 400 minority physicians it has trained. "We have our own pool," he says. "If they're good enough to graduate from

Harvard, then they're good enough to be hired by Harvard."

Robin Stanton Lee '90 (MD/PhD) praised HMS's high standing among its counterparts for recruiting minority students: 17 percent at HMS, compared to 12 percent nationwide. She credited the school's many minority-focused organizations as aiding this effort, including the Hinton-Wright Biomedical Science Society, the minority admissions subcommittee and the newly-formed Coleus Society.

Yet, said Lee, the school should not

think its problems are over. Citing examples of racism in classroom discussions and in a few cases presented in tutorials, Lee suggested a curriculum review made up of minority students and faculty in order to prevent "biased images portrayed in case studies."

Alvin F. Poussaint, MD was appreciably acknowledged and thanked many times for his work as associate dean for student affairs, and as director of the Office of Recruitment and Retention. Myers expressed the feelings of many students and alumni when he said, "Make absolutely no mistake, it has been through Alvin Poussaint's leadership that this medical school has maintained its role as a significant contributor of minority physicians in this country. Any success we can claim has only been through his hundreds of recruiting dinners, trips and speeches, and through the thousands of hours he has spent personally with many of us who, on occasion, have wanted to give up."

The celebration also presented the perfect time and place to award Joseph Hurd '64, chairman of gynecology at Lahey Clinic, with the Coleus Society's Spencer B. Lewis Award. Additionally, Kravitz presented Dean Emeritus Robert Ebert with an album of memorabilia from the beginnings of affirmative action. Ebert was an ardent player in the faculty's 1968 decision to begin actively recruiting minority students. "Of all the things that happened when I was dean, I'm the proudest of this," said Ebert in response. □



Alvin F. Poussaint, MD, associate dean for student affairs

Celebrating Affirmative Actions

The Early Years

by Leon Eisenberg

In 1954, at the height of the McCarthy era, Albert Einstein, himself under attack, had this to say about human rights: "The existence and validity of human rights are not written in the stars. . . . [They] have been conceived and taught by enlightened individuals in the course of history. Those ideals and convictions which resulted from historical experience, from the cravings for beauty and harmony, have been readily accepted in theory . . . and, at all times, have been trampled upon. . . . A large part of history is therefore replete with the struggle for those human rights, an eternal struggle in which a final victory can never be won. But to tire in that struggle would mean the ruin of society."

Einstein's warning against the consequences of growing weary in the fight takes on particular relevance at a time when civil rights have suffered serious setbacks in the courts as well as on the streets of the United States. In commemorating 20 years of affirmative action at Harvard Medical School, we do not—and dare not—meet to praise ourselves for having done then what should have been done long before, but in order to draw sustenance from that victory for the battles of the 1990s.

Harvard's history on minority admissions before 1969 is abysmal. It is little comfort that our record parallels that of every other American medical school, save the two established specifically as black institutions. In the academic year 1968 to 1969, there were 266 black Americans out of 9,863 first-year students in all U.S. medical schools—2.7 percent of the total enrollment. Incredible, you say? It was even worse than that bleak picture suggests. Half (133) were attending

Howard or Meharry. Thus, the black enrollment in all other U.S. medical schools was 133, or 1.4 percent, at a time when blacks made up 11 percent of the U.S. population. Native Americans, Mexican Americans plus mainland Puerto Ricans came to a grand total of 26 students.



From left, New York Times reporter Lee Daniels, Paula Johnson '85, Leon Eisenberg, MD and Deborah Prothrow-Stith '79.

It is all the more ironic that three black students had been admitted to HMS as early as 1850: Martin Robison Delany, Daniel Laing and Isaac Snowden. Within weeks of their admission, an angry and self-righteous group of fellow Harvard medical students protested that the presence of the blacks was: "... highly detrimental to the interests and welfare of the institution of which we are members, calculated alike to lower its reputation in this and other parts of the country, to lessen the

value of a diploma from it, and to diminish the number of its students."

It should be noted, in justice to the remaining Harvard students, that a group of like size completely rejected the bigoted call for expulsion. Their counter-petition stated that they would feel it an: "... evil, if, in the present state of public feeling, a medical college in Boston could refuse to this unfortunate class any privileges of education, which it is in the power of the profession to bestow. . . ."

Ambivalent on the matter from the start, the medical faculty concluded that the most prudent course to take was to require the three black students to withdraw at the end of the semester. So ended the medical school's first effort at integration. Parenthetically, a woman had been tentatively accepted that same year but she was "persuaded" to withdraw before the term began.

Not until 1869 did the first black, Edwin C.J.T. Howard, graduate from Harvard. He had distressingly few successors: no more than one, and too

often none, per class. A surge to a total of three in 1927 set a record! That tide, however, promptly receded.

With so much for prologue, turn now to 1968. Recall the state of the nation in that year. The struggle for civil rights was mounting, as was opposition to the war in Vietnam. The minutes of the March faculty meeting record an announcement by Howard Hiatt that 600 signatures had been collected from faculty and over 200 from students for an anti-war advertisement

to be placed in Boston newspapers. In March, the National Advisory Commission on Civil Disorders, appointed by President Johnson in the summer of 1967, issued its report. The commission stated its fundamental concern in the first two pages of the document: "Our nation is moving toward two societies, one black, one white—separate and unequal. . . ."

"What white Americans have never fully understood—but what the Negro can never forget—is that white society is deeply implicated in the ghetto. White institutions created it, white institutions maintain it, and white society condones it. . . ."

The commission report was barely out before the nation was stunned by the assassination of the Reverend Martin Luther King on April 4. Within hours, civil disorders broke out in major American cities. The toll in Washington was 11 killed, 1,100 injured, and \$24 million in property damage; in Chicago, 9 killed, 500 injured, and \$11 million in costs; and in Boston 21 injured, \$50,000 in damage.

Black Americans felt betrayed by the wanton murder of a man who was the symbol of black hope for peaceful change. White Americans were shaken—some by the tragic death of a heroic figure, others by the vast reservoir of anger in the black community, many by both. Was there anything that could be done in this environment to help heal the wounds?

Within three days of the assassination, Ed Kravitz and Jon Beckwith, then junior faculty members, started organizing an HMS response. By April 8, they had assembled a small group of colleagues to discuss ways of increasing educational opportunities and providing jobs for minorities. Ed corresponded with faculty at the other Boston medical schools, including Louis Sullivan, then an assistant professor of medicine at Boston University, who coordinated the BU effort.

The HMS ad hoc faculty group, assisted by Noel Solomons '70, then a second-year student, worked feverishly to formulate a proposal to present at the next faculty meeting scheduled for April 26 and to mobilize support for it. Phone calls, visits, discussions, consultations with the dean, drafts and redrafts succeeded one another. By the 23rd, a formal proposal, which called for scholarships for 15 "Negro" students and special efforts to recruit and admit them, was in the hands of the secretary of the faculty. (It was signed by nine faculty members: Jon Beckwith, Robert Buxbaum, Leon Eisen-

berg, Ed Furshpan, Warren Gold, Luigi Gorini, Ed Kravitz, David Potter and Torsten Wiesel.)

At the meeting our proposal was almost derailed when it collided with another agenda item. Changes in the system of clinical faculty appointments had been proposed, changes which many part-time faculty members saw as a threat to their private practices. As a result, both the March and April faculty meetings had drawn a singularly large attendance. Debate from the floor was often acrimonious and, to those of us impatient for consideration of our resolution, interminable.

With the scheduled end of the meeting in sight, Dean Ebert interrupted discussion of the appointment system to preserve time for the faculty to address the proposal for affirmative action. As presented, the resolution called for HMS: ". . . to contribute in a serious way to help solve the problems of race in this country. Harvard is dedicated to training men (sic!) who will become leaders. . . . Should we not

help train the leaders of the black community? We suggest as our immediate goal to admit 15 Negro students per year."

Given the historic moment at which that resolution was put forward, there was no open opposition to it. The challenges were more subtle: skepticism about the feasibility of the goal and objections in principle to a "quota." In the ensuing discussion, an admissions committee member pointed out that "only nine Negro medical students" had been deemed suitable for HMS in the previous 10 years: two of them had dropped out, one had taken five years to graduate, and in the 1968 first-year class, there were only two enrolled. A number of speakers extolled the lofty aim of the resolution, but went on to express doubt that the school could find qualified students.

Others objected to what they chose to regard as a quota and centered their opposition on the number "15." They urged that "15" be struck from the motion and that it be replaced by the

Minority Faculty Program Launched

With the ultimate goal of increasing the number of minority faculty members at HMS, the Minority Faculty Development Program has been launched, announced Dean Tosteson. Comprehensive efforts will be made to provide continual career advice and support for underrepresented minorities through all stages of career advancement: from pre-matriculation in medical school through clinical training, post-doctorate and junior-faculty levels.

The dean cited the accomplishments of the school's affirmative action program in enrolling students, but acknowledged the shortfalls, particularly in integrating the upper echelons of the academic ladder. He pledged his personal commitment "to work harder toward what are clearly serious, unachieved goals in our program of affirmative action, both for students and for faculty members."

The Minority Faculty Development Program (MFDP) grew out of student complaints to the dean that there were not enough minority mentors or role models, says Joan Reede, MD, MPH, director of the MFDP. A

committee was formed in 1988, chaired by Clyde Evans, PhD, who as director of the Office for Academic Careers was already dealing with the mentoring problem for minorities who wished to pursue an academic track. Evans asked Reede, who last year was a Harvard University Administrative Fellow, to write a proposal for the Faculty Council, based on the goals and themes outlined by the committee.

The proposal for the MFDP not only was approved unanimously by the council, says Reede, "but they were also enthusiastic and had wonderful suggestions." Reede serves half time as MFDP director, and is also an instructor in pediatrics at Children's Hospital and a post-doc research fellow at Harvard School of Public Health.

The continuity of support through all stages of career development is key. "In reviewing the literature and efforts made here and elsewhere," explains Reede, "we found that there has been a tendency to focus energy on one stage and not follow through with guidance over the long term." Because there just isn't a large pool of

phrase "substantial number." Once the wording was changed, the motion carried overwhelmingly. However, debate on the wisdom of deleting the numerical target continued, even after the motion had been approved. The dean asked those in favor of each alternative for a show of hands. The vote was so inconclusive that he appointed a committee, chaired by David Potter (and including two other signers of the original document), to return with precise wording by the next faculty meeting.

The committee report, presented to the faculty on May 24, did not equivocate; it called for the establishment of "at least 15 scholarships for disadvantaged students." In the absence of challenge, the report became official school policy.

In my view, stipulating a numerical target was crucial; it ensured an all-out effort at recruitment and it gave the minority subcommittee leverage. Had the wording of the resolution been limited to "a substantial number," the main admissions committee might well

have argued that 10 or 7 or even 5 constituted a substantial number and stopped at that—after all, HMS had never admitted more than 3 in the past!

What really made it possible for so bold a target as 15 to stick, however, was the decision to increase HMS class size by 15 students, from 125 to 140. Thus, there would be no reduction in the number of places for the usual applicants.

At the May faculty meeting, a second important decision was made. A petition signed by 278 medical students, endorsed in a letter from 11 senior faculty members, called for the establishment of a commission "... to explore potential contributions of the school in solving problems of Boston's black community." President Pusey, Dean Ebert and the faculty members who spoke to the proposal agreed that fact-finding made good sense. The faculty voted overwhelmingly, with only one negative vote recorded, to authorize the dean to set the process in motion.

In mid-summer 1968, Bob Ebert appointed the following as members of the Commission on Relations with the Black Community in Boston: Cliff Barger '43A, Jon Beckwith, Beach Conger '67, Len Cronkhite '50, Joe Dorsey '64, Dan Federman '53, John Moxley and Al Yerby from the faculty; Noel Solomons '70 and Jim Tenney '70 from the student body; and Eunice Beale from staff employees. I was appointed chair and Bob Morgan, staff director.

In pursuit of our mission, we established seven task forces and issued our final report on April 11, 1969. Because the commission was organized as an operating as well as a fact-gathering body, key recommendations had already been put in place before the report was completed.

The report was scheduled for presentation to the faculty on April 11, 1969. However, that meeting was preempted by the events arising from the student seizure of University Hall and President Pusey's decision to call on

senior-level minority faculty nationwide from which to recruit, she points out that the other tactic is to bring minorities up through the ranks.

"Harvard has a good history of recruiting and training minority students, but the numbers drop off for residencies, and drop lower and lower at the higher levels of faculty appointments. One objective is to get minorities to stay for their residencies and fellowships."

Reede, working with the Office of Student Affairs, will assist students in finding mentors and laboratory research opportunities. Clyde Evans' Office for Academic Careers offers similar support for faculty. Reede's office will provide a missing link between his faculty efforts and those of Alvin Poussaint's Office of Recruitment and Retention with students.

One activity of the MFDP, the minority visiting clerkship program, started in July. Minority medical students from around the country are being encouraged to apply for clerkship rotations at Harvard hospitals (a supplement to the existing "externship" program open to any student). The hope is that by exposing minori-



Joan Reede, Clyde Evans, and School of Public Health student Jacqueline Maloney chat at the Coleus Society reception following the affirmative action symposia.

ties to the Harvard environment and its support networks that more will apply for residencies here.

"I think that many minorities enter medical school with the desire to serve their communities when they graduate," says Reede. "Students

wonder if they can clinically serve the minority community and still pursue an academic career. The program will provide an opportunity for students to meet faculty that have bridged both."

—Ellen Barlow

the police to evict them. Because of that extraordinary event, it was necessary to convene a special meeting on May 15 to present the report, which already had been circulated to the faculty by mail.

In introducing the discussion, I made the following remarks: "...there will be some among you who will dispute our emphasis on jobs for blacks, health care for blacks, educational programs for blacks. It has become fashionable to complain of 'discrimination in reverse' and to bridle at... 'quotas'. To highlight the issues... it seems to me useful to borrow a phrase from physics: the nonconservation of parity, or the lack of symmetry, in civil rights.

"Quotas have traditionally been devices of *exclusion*, by which a dominant group erected barriers against the educational or social advancement of a degraded caste or class. When *minima* are established, say 15 disadvantaged students per class, in order to insure the participation of those previously excluded, minima established by those with resources on behalf of those without them, it is a perversion of language to label such steps 'quotas'. Given the historical legal, economic and social factors that have kept American blacks, Indians, Mexicans and Puerto Ricans in disadvantaged roles—factors which have resulted in a gross underrepresentation of these populations in American professional life—only commitments in the form of fixed minima

can even hope to rectify centuries of injustice. . . ."

The discussion that followed was lively but polite. The two major issues—maintaining "standards" and identifying criteria for "disadvantage"—that were raised at that meeting remain with us today. All agreed that it would be a disservice to the students if we were to lower standards of competence for graduation, but there was no explicit address to the question: competence for what?

On the other hand, some of the very same speakers wanted us to admit "the truly disadvantaged" and argued against "creaming" the pool of black talent. There was and is something a bit quaint about that worry on the part of a faculty that has always creamed the pool of white talent.

In fact, Harvard's action not only opened *its* doors, but set a standard other schools felt obliged to follow. The net impact was a tenfold increase in the number of blacks admitted to medical schools before the decade was out. The rate of increase for Chicanos, mainland Puerto Ricans and Native Americans was even higher because the base was so low.

The commission report was presented for formal action at the meeting of May 23, 1969 and was accepted unanimously. The recommendations on admissions were faithfully incorporated into school policy. Many of the other recommendations (in curriculum, employment, medical care and

community physicians) failed to receive the attention they merited and were only partially implemented.

What actions were taken during the eight months the commission was at work? David Potter, chair of the Task Force on Students, put enormous effort into ensuring that HMS would meet its announced goal. With personal funds, he went on recruitment trips to universities and colleges with substantial black enrollments. Edgar Milford '72, appointed as a fellow in administrative medicine, made contact with black student organizations and worked with Perry Culver '41 to prepare and circulate a recruiting brochure. Other members of the task force—Collins Lewis '71, Ed Furshpan and Bayley Mason—took the lead in developing a health careers summer program designed to increase the future pool of minority applicants.

These and related efforts led to 135 applications from black pre-meds, six times the number received in the prior year. In consequence, HMS was able to enroll 16 black students and HSDM 3 for the Class of '73.

From the first it was evident that we had to recruit additional senior minority faculty members sensitive to, and capable of meeting the needs of, the incoming students. We were cautioned by one minority student: "The sooner Harvard Medical School has [a liaison between the administration and black students]... the more conducive the environment will be for integrated medical education."

At the same time, we rejected forming a black office for black students. Our goal was to have a cadre of student advisers, black and white alike, available to all on the basis of professional and personal needs. At Dean Ebert's request, I conducted an informal national search, which led to the identification of Al Poussaint as the ideal person to lead the student counseling program. Al joined HMS as associate professor of psychiatry and associate dean of student affairs in time to welcome the Class of '73.

HMS has kept to the commitment it made in 1968 and implemented in 1969. The program survived a painful attack in the *New England Journal of Medicine* by a senior faculty member, who questioned whether "standards" were being stretched to award diplomas to students "unable to handle the material." This article was deeply distressing to minority students.

As one student later wrote: "Those of us whose skin is black or who have Spanish surnames have lost some pub-



Edward Kravitz presents Dean Emeritus Robert Ebert an album of memorabilia from the early days of affirmative action.

lic confidence and this has adversely affected our doctor/patient relationship. Now, in addition to the normal issues we must deal with, one more has been added—the irrelevant issue of one's ethnic heritage.”

Dean Ebert responded with a forthright public defense of the competence of our minority students and the integrity of HMS standards. His statement concluded with these words: “The medical school reaffirms its commitment to the education of able minority students.”

The program survived the Bakke decision (Regents of the University of California v. Bakke, U.S. Supreme Court, June 28, 1978), which aroused doubts about whether affirmative action programs could stand up to legal challenge. They could and they did.

As the United States Civil Rights Commission stated in 1978: “The Commission considers affirmative action admissions programs at the Nation's law and medical schools entirely proper and worthy of emulation rather than condemnation. Turning away from these programs would be an appalling step backward for this society. It could also serve as a signal to individuals and institutions throughout the Nation that what is past is not prologue but is simply forgotten, and that our legacy of historical obligations can be ignored.”

In the 20 years between 1952 and 1972, HMS had 18 minority graduates. In the next 20 years, 1973 through 1993, it will have had 530. None of the initiators of affirmative action dared dream of so many.

The productivity of Harvard's minority graduates has been extraordinary. Time permits citing only one example. The Robert Wood Johnson Minority Medical Faculty Development Program each year seeks out the most promising young physicians who are committed to an academic career. The very best are selected to receive four years of support for basic biomedical research. Of the 47 RWJ fellows chosen thus far, 15 are HMS graduates.

Pfeiffer Foundation support for minority research fellowships and for the Hinton-Wright Biomedical Society has been an important part of this success story. That one datum must stand as proxy for the accomplishments of the many graduates of this school who have made their mark within one generation.

I began by pointing out that the purpose of this commemoration is to renew ourselves for tomorrow's battles for equal rights, not only in medicine, but in health.

National data on the size of the black medical school applicant pool were not collected before the 1969/70 admissions season. The number of black applicants increased from 870 in '69 to 1,275 two years later because of the increase in acceptances. The number rose to 2,600 by 1982. An expansion of the pool is what we had hoped for and that is what we seemed to be achieving.

Since that time, however, the pool has shrunk back to about 2,200. The same discouraging facts are evident in

gram, however, is a move in the right direction.

But the greatest challenge lies in improving the health status of black Americans, where racial inequities not only persist, but grow worse. Whereas life expectancy for white males continues to rise, for black males it has actually decreased since 1984. Race differentials are visible at every level: infant mortality rates are twice as high; young adult male mortality rates for homicide, 7 times as high; and rates are higher for neoplasms, for heart disease,



Paula Johnson '85 and Michael Bigby '75 at the reception.

the numbers of Mexican American, mainland Puerto Rican and Native American applicants. The pool of minority applicants to HMS has declined by half.

Although the admissions committee has been able to maintain a minority presence close to 20 percent, this is becoming more difficult each year as the number of applicants remains constant and the percentage of accepted students choosing Harvard declines, mainly because tuition is lower or the financial aid package better at other medical schools. The immediate need is to increase scholarship funds. The longer term need is to increase access at every level of education.

If we have achieved relative success in admissions, it is shocking how little progress has been made at the faculty level. Over the past decade, representation for all minorities at HMS has remained at about 3 percent for professors, 1 to 1.5 percent for associate professors and about 2.5 percent for assistant professors. The Faculty Council's recent decision to establish a minority faculty development pro-

for AIDS. Surely, this is intolerable in a nation that professes to be civilized.

I concluded my remarks to the faculty in May 1969 with these words: “Only a commitment to national action on an unprecedented scale can shape a future compatible with the historic ideals of American society. . . . The major need is to generate new will—the will to tax ourselves to the extent necessary to meet the vital needs of the nation. . . . It is time now to end the destruction and the violence, not only in the streets of the ghetto but in the lives of our people.”

Twenty years later, that call to action from the Report of the National Advisory Commission on Civil Disorders has, unfortunately, lost none of its relevance. Is it not time we took it to heart? □

Leon Eisenberg, MD is the HMS Maude and Lillian Presley Professor of Social Medicine and professor of psychiatry. He chaired the HMS Commission on Relations with the Black Community during the 1968/69 academic year.

Celebrating
Affirmative
Actions

The Days That Shook HMS

by J. Emilio Carrillo

My press secretary prepared a wonderful, very well-researched speech on health in minority communities. But I can't pass up this opportunity to reminisce.

It was almost 18 years ago that the Class of 1976 entered Amphitheatre C and began our freshman orientation. It was a very different class from previous years. It was probably the second or third class that had a measurable number of minorities. You didn't need a microscope to pick us out—we all used to sit up in the far corner of Amphitheatre C.

We were the class that began college in 1968. That was the year that shook Paris, New York, and many other parts of the country and the world. We were the ones involved in the civil rights struggle, in community self-determination struggles. We protested against the Vietnam War. We were the ones who heard Martin Luther King in person speaking at Washington rallies.

So we were a very special group. We were fortunate that history placed us in the '60s at a time when we were young and had our professional lives ahead of us. We had the rest of our lives to fulfill the commitment and dedication that arose from those years of struggle.

We came to our HMS freshman orientation and were told about our biochem curriculum, about our histology curriculum. Then we were told that in three weeks we would have a session on social medicine, which would deal with public health, biostatistics and epidemiology.

We—the minority and progressive students—were very excited about

these lectures. We had our intellectual roots in liberal arts curricula at the major universities. From there we had come to this regressive, back-to-high-school environment, where we had to sit like children and be spoon-fed biochemistry lectures that had even been given to us written out beforehand. The New Pathway was many years down the line.

We came to the social medicine sessions with tremendous expectations. We all sat together, only this time we didn't sit in the back of the class. We sat in the front. This session was special; it was "ours."

And what did we hear? We heard one epidemiologist tell us about the Tuskegee study, in which black men were used as controls and not treated in syphilis studies. In essence, he said this was not a bad thing epidemiologically, and that we had to learn to separate our emotions from our science, and look at science without ethical compromise. That was quite upsetting, and many of us were starting to rumble. Several of us walked out.

What followed was just as bad: another epidemiologist told us about studies in South Africa for developing the pneumococcus vaccine. They were doing studies on South African miners to test the vaccine. We were shocked. Our minds were just totally "blown," as they used to say, by these lectures. Spontaneously, many stood up and spoke out. Then a group just walked right out of Amphitheatre C.

People were horrified. This had never happened at good old HMS. Ninety-eight percent of the minority students, plus maybe 10 percent of the non-minority students, had all just filed right out.

But we were not really alone. Ed Furshpan, David Potter, Al Poussaint, Julius Richmond, Leon Eisenberg, and many other faculty members supported us and helped us resolve the situation. With their help, we worked out our own course by the winter session.

That action energized us. We bonded as a group, taking our very own course together. The Latinos, the blacks, and everybody else came together and continued to work in unity. We formed the Third World Caucus and the Biosocial Curriculum Committee, which was a foreshadowing of the New Pathway.

We said, "Look folks. You have an HST curriculum. That's great. That provides us with the engineering we need to develop medical scientists who can work in the field of biotechnology. But what about the biosocial content?" We didn't know about the bio-psychosocial model. We were just thinking with our guts and our experience. Why not have a biosocial curriculum that addressed the issues that we were going to confront when we were doctors and went back to our communities? How were these biochemistry lectures and histology lectures going to prepare us for that?

We were missionaries. We were determined. We were impatient. We were irreverent. I was an angry young man. I'm still angry, but I'm focused, which I was not then.

Two weeks ago I ran into Sylvestre Quevedo '75 at a conference in L.A.



J. Emilio Carrillo

We were reminiscing about some of the humorous things that happened in medical school, like the time that we had a meeting with Dean Robert Ebert. We were going to talk to the dean because we wanted to enhance recruitment, retention and admissions of minority students, and because we wanted a biosocial curriculum. We wanted immediate gratification.

It was like preparing for the Paris peace talks. We had determined who would sit where, and had demanded that the meeting be taped. We got there before Dean Ebert and I, the bold one in the group, took his seat.

Dean Ebert came in, stood next to me, and said, "Excuse me, that's my seat." And I said, "I got here first."

Needless to say, four years later when I was going for my dean's letter, I heard about that incident. It had been a tough meeting. But, the students were not alone; with us were Leon Eisenberg, Julius Richmond, Al Poussaint, Ed Furshpan, David Potter, Jon Beckwith and others. And that cannot be forgotten.

We proceeded to aggressively organize minority student recruiting, admission and retention, and we created the Boricua Health Organization, the Black Student Organization, the National Chicano Health organization, and the Third World Caucus. We were creating organizations every year.

We wrote our own biosocial curriculum. Here we were, freshman medical students writing a curriculum, which I think you can find pieces of in the New Pathway 15 years later. We picketed commencement in 1973, and passed out leaflets saying, "We want a biosocial curriculum." We were angry and we were impatient.

I remember a letter that Leon Eisenberg sent me one day, a very effective letter. He said to me, "Emilio, you're involved in a lot of struggles and you're doing great things. But I'm sending you something to read for your consideration." He sent me a copy of a commencement speech presented by then president of Chile, Salvador Allende, at the University of Mexico. Basically the speech said, get your medical degree, get your certifications, your positions, and *then* organize. Then become activists. Become the best possible fighters you can. You'll have plenty of time in your life to move for social change.

Well, Leon, I did that. I studied. I worked, and here we are. I'm in the front lines of the Health and Hospitals Corporation, a \$2.7 billion corporation that runs all the municipal hospitals,

health centers and ambulance services in New York City.

Some things never change. Once again, I'm working with Julius Richmond, only this time to save the babies. We're working with Commissioner Woody Myers, bringing together coalitions to address infant mortality in Harlem and other parts of the city.

We're working with other allies from the early '70s on the development of the Sophie Davis Medical School; currently a two-year medical school with no clinical years. For years, previous presidents of the Health and Hospitals Corporation would not open the doors of municipal hospitals for these third-year students to train. I'm opening those doors so that we can begin to fulfill the dream of the Sophie Davis Medical School to take young men and women in New York City, give them scholarships and put them through medical school. They in turn can give us a few years' service, kind of like a city health service corp. We can do that.

The things that I learned at Harvard

are serving me well. What I learned about primary care from John Stoeckel and Bob Lawrence is being reflected today in New York City. I've also brought what I learned from my work with Leon Eisenberg on the *Journal of Latino Community Health*, my work with Al Poussaint on minority recruitment, my work with Julius Richmond, and with Howard Hiatt on Project Life, which brings together the people in the Mission Hill community with Harvard School of Public Health professionals.

The struggles are the same as they were 18 years ago, maybe worse. Back then we had many challenges, barriers and unknowns. But we didn't have AIDS, crack, or the degree of homelessness that we have now.

Today we're more sophisticated, focused and mature. We have the same energy and vision we had then. In fact, I think we may have more. □

J. Emilio Carrillo '76 is president of New York City's Health and Hospital Corporation.

Celebrating Affirmative Actions

Minority Health: Better But Not Equal

by Woodrow A. Myers

I've been asked today to provide you some perspectives on health care issues for minority patients, something I've done for the past 17 years, since I was a premedical student. In those speeches, I've discussed a multitude of health status indicators, including life expectancy and infant mortality. In each I've discussed the differences between black and white and Hispanic, explaining the reasons why black and Hispanic patients suffer more. I've suggested what should be

done in order to improve those indicators and thus, the health status of poor people in this country.

In these 17 years, has the situation improved? There have been some significant improvements for many black and Hispanic men and women in this country. Things have gotten better for many of us—certainly not in every geographic area, and certainly not for every disease, but all in all and overall, access and quality have improved.

The overt discrimination of the

1960s and before, where a black or Hispanic person was automatically and immediately denied access to care solely on the basis of color, has virtually disappeared. Much of that change was due to the passage of civil rights laws and gradual shifts in attitudes among health-care providers and health-care institutions. However, I believe an equal amount of change was due to the improvements in financial access to care through Medicare and Medicaid, and other government financed or government sponsored programs that provided the funds necessary to care for individuals in need.

With Medicare and Medicaid, no longer were the poor and the elderly forced to depend solely on charity. For the first time they brought with them a source of reimbursement. It's amazing how quickly some attitudes will change when there is a financial incentive for change.

During the 1970s and '80s black and Hispanic people sought care in ever increasing numbers and, although that care was not always equal to the best this country can offer, and although that care was provided disproportionately in the public sector instead of in the private practice of medicine, necessary medical care was provided and was important in helping us to view fewer unnecessary, premature deaths. The scenario in the '40s and '50s of driving from hospital to hospital seeking treatment for common everyday occurrences, such as trauma after a motor vehicle incident or labor pains and the impending birth, and then being denied access to the hospital

solely on the basis of being black, has just about disappeared.

On the horizon, however, I see changes that I just don't like. There are a number of warning signs today. I sincerely hope those of us who care about access and quality will recognize these warning signs and will be moved to stop the retrenchment I believe is beginning to occur.

A particularly good example at the primary care end of the scale is the poor woman who needs prenatal care. If she comes in during her first trimester, is screened for conditions that might complicate her pregnancy, and receives treatment for those conditions, she has a much better chance of delivering a healthy baby. If she also takes advantage of the WIC (Women, Infant and Children) program, which will give her coupons to purchase milk and cereal and other food that will improve nutritional status, she will have a much better chance of delivering a child of normal birth-weight without complications. And, if she will follow our advice in avoiding alcohol and tobacco, unprescribed drugs and illegal drugs, she will avoid the complications of those substances as well.

Good prenatal care need not be especially complicated. It's not unpleasant, it's relatively painless and it pays off. Yet, infant mortality in the black and Hispanic communities in New York City has for the past five years stayed virtually the same instead of decreasing. In the midst of an explosion of interest in prenatal care, in the midst of significant expansion of the Medicaid program to cover more and

more women (who, prior to this time, were not eligible for coverage), and in the midst of more Americans knowing more about health and medical care than any previous time in history, the infant mortality rate for black women remains about two times the national average. We believe that in New York City crack cocaine is a major reason.

The infant mortality rate for crack cocaine-using mothers during pregnancy has ranged between 35 and 40 deaths per 1,000 live births over the last five years, while the infant mortality rate for noncocaine users hovers around 10. Of the 2,800 women whom we know used cocaine during pregnancy in 1988 in New York City, 64 percent were black and 21 percent were Puerto Rican. We suspect this is a serious under-count of the total number of women who used cocaine during pregnancy.

The rate of prenatal illicit drug use has moved from 10.4/1,000 live births in 1985 to 31.4 in 1989. Associated with illicit drug use, of course, is the HIV seroprevalence; in New York City in 1989, 1.23 percent of all newborns were HIV positive—3,215 infants out of the 262,090 born in 1989. Approximately 30 percent retain antibody to HIV and will ultimately develop clinical disease. All of the mothers are presumed HIV positive and will succumb to the disease.

We must rethink all of our assumptions in the epidemic of drug abuse in the United States, and change the norms in this country such that our children know, in no uncertain terms, that the use of illicit drugs cannot and will not be tolerated. However, in addition we must insure that services are provided for those who need our help.

So, those gains that we've made, over the past decades in access to care are being erased by the problems brought about by crack, cocaine and the other drugs that are used ostensibly to escape and to mask one's pain when, in fact, they cause more pain than was ever present before.

At the opposite end of the scale, we practice in the incredible world of tertiary, high-tech care. Through the investment of the American people, as administered by the National Institutes of Health, we have achieved unparalleled success in the creation of innovative medical technologies, which allow us to do amazing things to help human beings enjoy life, and in some cases maintain life. Therapy I couldn't even dream about while attending this medical school in the mid-1970s is now being used on a daily basis to help the



Woodrow Myers '77 and Clifford Barger '43A catch up after Myers's speech.

same patients we really couldn't help on E and F Main in the Brigham and on the Bulfinch of the Massachusetts General Hospital.

What's even more astounding is that we are truly at a beginning, not at an endpoint, in what medical science will be able to do. From the laboratories that surround us on the Quadrangle, and from similar establishments across the world, we will truly enter over the next two decades an unparalleled period of achievement and unlocking of the basic secrets of life and of the diseases that limit it.

Certainly each of our achievements in immunology, genetic engineering and transplantation has a price. Not just the price of human labor, and the training, nurturing and management of the incredible human talent bank needed for these achievements to occur, but the monetary "price" of the ticket that admits one into the offices, into the laboratories, and into the diagnostic and therapeutic suites where the miracles are prescribed and performed.

Tertiary care is expensive. The diagnostic and therapeutic technology of the 1990s has associated with it an incredible cost that seems to grow and grow. There's mounting evidence that some of the care we provide in tertiary settings is unnecessary and that physicians far too frequently perform procedures when other, less expensive, less potentially harmful options would suffice. That is an important problem that demands the attention of every specialty in the profession. What scares me, however, is the trend towards the elimination of access to tertiary care when it is clearly necessary to preserve and prolong life.

Perhaps I am going against the grain, but I am deeply disturbed by the experiment now taking place in the state of Oregon where an attempt is underway to "prioritize" 1,600 health procedures and services and ration those that reportedly "do the least good for the least number." Ration is a code word for deny. Thus, in Oregon, if one is unlucky enough to have a disease that cannot be treated appropriately in the clinic setting, a disease that requires the application of expensive technology, then one is simply out of luck.

Some have called it innovative. Some have called it an imaginative experiment. I call it discrimination on the basis of disease and I believe it opens the door for other forms of disease-based discrimination as well.

Will we decide in our public programs to treat only those diseases for



Michael Myers '85 presents the Coleus Society's second annual Spencer B. Lewis Award to Joseph Hurd '64.

which we have definitive therapy? Will we abandon attempts to achieve a cure when the odds may be against us? Does it mean that one day we will have to decide that only one opportunistic infection will be treated for each patient with AIDS? Will we decide that the 19-year-old kid who refused to wear his motorcycle helmet should not have his epidural hematoma drained because it requires high-tech interventions and a stay in the ICU? What happens after people are admitted and it's discovered that their condition is terminal? Do we then discharge them from the hospital? Of course, in Oregon and elsewhere, these questions only apply to the poor.

Although labeled as a rational way to deliver more care to more people, this approach to medical care is simply a way to deny services to people who need them based upon the false notion that this society must make such a decision in order to achieve an arbitrary, budgetary target. It is discriminatory. It can be racist. It is unfair. And it is simply wrong.

In my opinion, the U.S. Congress should prohibit states from this form of discrimination within the Medicaid program. We should all note that no one has attempted to impose similar limits in the Medicare program. Remember that Medicare cares for the elderly, while Medicaid cares for the poor.

You know there have been other experiments where we have followed the natural history of disease without applying known, potentially effective medical interventions. It's regrettable that the government of the United States has even participated in such experiments, one of which occurred in

Tuskegee, Alabama, where, in order to follow the natural history of the disease, patients with syphilis were "observed" and available medical therapy was not provided. I fail to understand how in essence the Oregon experiment differs.

I believe that the challenge for those of us in medicine who care about access and quality is to preserve and enhance those programs that have been put in place, have achieved some success, and that need enhancement and improvement, not dismantling.

Finally, I wish to recall the spring of 1976. I was a third-year student. I, a number of my colleagues, and Dr. Alvin Poussaint stood in the Quadrangle and talked about a different side of the issues surrounding minority health. An esteemed professor of microbiology at this institution had just published an editorial in the *New England Journal of Medicine* that criticized several HMS programs designed to admit minority medical students. In comments to the press, we were compared to airline pilots who had flunked landing. He said that lower standards applied to minority students at Harvard Medical School affected the school's quality and would lead to poor medical care in hospitals across the country. He said it was cruel to admit students who had a very low probability of measuring up to reasonable standards, and that it was even more cruel to abandon those students and allow the trusting patients to pay for our irresponsibility.

I could not let this day pass without pointing back to those statements to remind you in this audience of where we were and how far we've come. It's not just that Emilio Carrillo and I, both HMS graduates, have achieved the highest roles that physicians can have in the city of New York. It's not just that all of our colleagues who graduated with us, who happened to be black or Hispanic, have achieved similar success in their fields of endeavor.

To maintain and enhance our access to this wonderful profession, we have to remember there are still people who, in 1990, believe what was said about us in 1976. In spite of whatever success we have achieved, we must remember that the struggle for equality, the struggle for equal access, the struggle to carve a role in the medical establishment has not ended, and that throughout our lifetimes will remain a major challenge. □

Woodrow A. Myers '77 is commissioner of the Department of Health in New York City.



The Class of 1990 stood up and, in unison, facing family, friends and significant others, said it all with two words: "Thank you." So began the ceremony that would crown four years of study and send 166 new doctors off on a new phase of lifelong learning.

The day, which shone with conviviality as well as sunshine, was co-moderated by Preston Phillips and Eileen Reynolds. Daveed Frazier first took the stage and shared the reasons he chose medicine. From his pre-matriculation visions of heroism, he described how he has come full circle to appreciate the realities and the opportunities of what it means to be a doctor.

Benjamin Scheindlin then used humor to bring the audience, rolling in laughter, through the changes incurred by a medical education. One of the changes is in a student's use of language: What was a vagus nerve to him was to his brother the bravado one brings to Las Vegas. Medicine, he concluded, sometimes does resemble vaudeville; when you ask, "What brought you to the hospital today?", people sometimes do respond, "The bus." But it's these kind of punch lines, he says, that keep one's perspective from becoming too skewed.

Lewis First '80, the HMS guest speaker, used different methods of teaching to convey take-home lessons. Sprinkled throughout was humor, the tried-and-true way to bring home a lesson. But at the heart of his message was a comment made by Sherlock Holmes in a Sir Arthur Conan Doyle story: "Education never ends, Watson. It is a series of lessons with the greatest for the last."

Keynote speaker Anthony Fauci concentrated on the changes in the medical profession. When he graduated in 1966, he said, what are now the most commonplace features of medicine were either nonexistent or experimental. All of immunology, now a subspecialty, was covered in two lectures when he was in medical school. He offered the graduates some inspiring advice and wished them the joy and satisfaction that he has found in the profession.

CLASS DAY



The class then showed appreciation for faculty and friends. The preclinical teaching award went to Steven Weinberger, assistant professor of medicine at the Beth Israel, and the clinical, to Beverly Woo, assistant professor of medicine at Brigham and Women's. The class then honored two people whom they felt were dear and made them feel at home at HMS: Daniel Federman, dean for medical services, and Carola Eisenberg, dean for student affairs. Carola Eisenberg and Robert Masland, head of adolescent medicine at Children's Hospital, were chosen "to hood."

Seventeen students graduated cum laude, seven graduated magna cum laude, and seven were honored with prizes and awards:

James S. Allan, magna cum laude, the Harold Lamport Biomedical Research Prize for the best paper reporting original research in the biomedical sciences: "Circadian Control of Human Thyroid Stimulating Hormone."

Matthew Anderson, cum laude: "Agricultural Health Policy in Bananera, Guatemala."

Wanda Barfield, cum laude: "Comparisons of Birthweight and Mortality Among Black and White Infants Born in California Military Hospitals: 1981-1985."

Douglas Scott Bell, cum laude: "Catecholamine Uptake as an Assay for Neurite Sprouting: Identification of two conditioned media with uptake enhancing activity."

Genevieve L. Bennett, magna cum laude, James Tolbert Shipley Prize for excellence and accomplishment in research: "Transgenic Mice Carrying an HTLV-I LTR Activated C-MYC Gene: A unique T-cell lymphoma model."

Michael P. Bogenschutz, cum laude: "Molecular Analysis of MDR-like Genes

and RNA Transcripts in Drug-Resistant and Drug-Sensitive Strains of *Plasmodium Falciparum*."

Susan Canning, cum laude: "Fine Mapping and Sequence Analysis of Deletions of the Retinoblastoma Gene."

Catherine C. Chen, cum laude, Henry Asbury Christian Award for notable scholarship in studies or research: "Selective Degradation of T-cell Antigen Receptor Chains Retained in a Pre-Golgi Compartment."

John C. Choi, magna cum laude: "Retinal Microvasculature of MACACA FASCICULARIS: An anatomical study."

Ross A. Clevens, magna cum laude, Leon Reznick Memorial Prize for excellence and accomplishment in research: "The Neurochemistry of Parkinson's Disease Dementia."

Merit Ester Cudkiewicz, cum laude: "Neuropathological Alterations in Huntington's Disease Cortex: A morphologic and histochemical study."

Daniel Gert Deschler, cum laude: "The Effects of Topical Application of Cholera Toxin, Insulin-like Growth Factor I, Bombesin and Their Combinations of Epidermal Regeneration in Split-Thickness Wounds."

Howard W. Francis, cum laude, Commonwealth Fund Medical Fellowship: "Electron Microscopic Studies of Reciprocal Synapses and Other Synaptic Morphologies in the Chimpanzee Organ of Corti" and "Patterns of Innervation of Outer Hair Cells in the Chimpanzee."

Daveed Damon Frazier, cum laude: "Poly(propylene Glycol-fumarate): Optimization of a particulate composite for use as biodegradable bone cement."

Mark W. Frohlich, cum laude: "Enhanced Expression of the Protein-Kinase Substrate p36 in Human Hepatocellular Carcinoma."

Nicole Glaser, cum laude: "Perceptions of Teenage Parenthood Among Black Adoles-

cents: A set of case studies in an inner-city Boston community."

Roger Joseph Hajjar, cum laude: "Calcium Responsiveness of Myofilaments in Cardiac Muscle: A novel approach of characterizing calcium activation in human myocardium."

Lori Kaplowitz, cum laude: "The Effect of Human Pheromones Episodic Gonadotropin Secretion and Timing of the Menstrual Cycle."

Howard Lebowitz, cum laude: "Negative Impedance Ventilation as a Novel Mode of Respiratory Assist."

Robin Lee, cum laude: "Tumor Necrosis Factor: Modification of its mRNA levels in human cells."

Adam Nathaniel Mamelack, magna cum laude: "The Desynchronized Sleep Generating Network: A combined anatomical, pharmacological, and physiological analysis"; and the Dr. Sirgay Sanger Award for excellence and accomplishment in research, clinical investigation or scholarship in psychiatry for "Dream Bizarreness as the Cognitive Correlate of Altered Neuronal Behavior in REM Sleep," written in collaboration with J. Allan Hobson '59.

Thomas R. Pereles, magna cum laude: "Mechanistic Studies on the Anti-Angiogenic Effect of Hydrocortisone and Beta-Cyclodextrin Tetradeceasulfate."

Preston John Phillips, cum laude: "Abnormalities in the Excitation-Contraction Coupling Scheme: Evidence of important causes of contractile dysfunction in ventricular myocardium from patients with end-stage failure."

Eileen Reynolds, the Richard C. Cabot Prize for the best paper on medical education or medical history: "Stresses, Strains, Successes, Three All-women's Medical Schools, 1850-1900."

Byron Wilson, magna cum laude: "Antigenic Changes of Neoplastic Transformation." □



C L A S S D A Y

Grand Expectations

by Anthony S. Fauci

You and your families have every right to bask in the glory of this day. I know that you are also experiencing excitement, anticipation, and even trepidation about what lies ahead as you very shortly enter the next phase of your professional lives. It is but the first step in what can prove to be a lifetime of contribution and gratification, a professional life characterized by almost limitless opportunities and enormous responsibilities.

When I began to put my thoughts together to prepare this address, I reflected back to 1966 and my own graduation from medical school. The excitement and electricity of that day was for me so similar to what is palpable here today. I tried to capture in my own mind a prevailing concept that I could build upon in addressing you. What emerged was a realization of an extraordinary and almost invariable dichotomy in the evolution of my professional experiences.

On one hand there has been and continues to be enormous change in medicine and biomedical science: from the emergence of the biotechnology industry to the revolution of basic scientific advances, to the actual application of these advances to the practice of medicine, to the delivery and financing of health-care, to the climate of medicine vis-à-vis the public perception and media interest, to the emergence of unprecedented social, legal, ethical,

and even political issues that impact scientists, physicians and other health-care professionals.

On the other hand there are certain immutables in biological science and medicine that were present long before any of us here today were involved in the field, and hopefully will continue to remain long after we are gone. I will comment on just a few of these mutables and immutables and try to put into perspective how they might relate to you and to your future professional experiences.

To my observation, the most obvious changes that have occurred in medicine and the biological sciences since I graduated from medical school have been the extraordinary advances in biomedical research and its applications. Many of today's most commonplace features of medicine and the biological sciences were either nonexistent or still highly novel or experimental just 24 years ago.

This is most cogently exemplified by the explosion in the field of molecular biology, and the rapidity with which it has impacted virtually every subspecialty of medicine. Delineation of the molecular mechanisms of congenital and acquired diseases has allowed unprecedented insights into pathogenesis and potential treatments. From the perspective of my own specific research and clinical interests, I have seen the remarkable advances in basic immunology lead to the emer-

gence of the subspecialty of clinical immunology, whereas all of immunology was covered in two lectures in my medical school curriculum.

There have been major technologic advances that have revolutionized the area of diagnostics. CAT scans, PET scans, NMR and other imaging techniques have added a level of sensitivity and specificity to diagnostic procedures that was unimagined two decades ago. The neurosciences have emerged as one of the most rapidly advancing scientific disciplines. The entire field of organ transplantation has successfully accelerated in parallel with a more precise understanding of the regulation of the human immune system. We have seen the appearance of new or previously unrecognized diseases such as Legionnaire's disease, toxic shock syndrome, Lyme disease, and of course AIDS.

These remarkable advances and evolutions underscore a major lesson that I learned early on after medical school, namely that we are perpetual students. Be prepared for a mild shock. Unless your ego clouds your reality testing, you should and will have a chronic sense of inadequacy, which you will hopefully keep in check by continuing to learn more and more.

This will be absolutely necessary since your generation will witness an acceleration of innovations and discoveries in biomedical disciplines that will dwarf what I have experienced over the past 20 years. Dr. Donald Fredrickson, former director of the National Institutes of Health, expressed this poetically in an essay on advances in medical sciences when he wrote, "... the mosaic of medical knowledge is eternally unfinished."

Today we become colleagues in that arduous, sometimes frustrating, but always gratifying experience of gaining and applying new knowledge for the ultimate good of the patient. This may be realized in one or a combination of endeavors that you might choose. In fact, this is precisely the reason why the position you are in at this very moment is so exciting. You are virtually totipotent in your profession.

The range of career possibilities in medicine or the biological sciences are extremely diverse and essentially limitless. I happened to have chosen the dual tract of basic and clinical research as a physician-scientist. It is exactly what I wanted to do, but it certainly is not for everyone. I would be delighted if a substantial proportion of you went into basic research, and even better, immunology research. Of course, this

is neither realistic nor appropriate.

I do worry, however, that medical students and graduate students in the biological sciences feel pressured to follow certain paths because they are either well established, prestigious or financially lucrative. I encourage you to find your own niche, one in which you are happy, in which you can excel and feel good about yourself. No matter what specific area you choose, you will find that you can become an important part of the more global enterprise of medicine whose task is to improve health, reduce disease and alleviate human suffering.

Your choices can span widely diverse, yet critically important areas such as biotechnology and basic biomedical research, clinical research, health-care delivery (either as a generalist or in a wide variety of subspecialties), teaching, administration, public health and health policy. While each requires specific talents and specialized skills, no one area is more valuable than another. We must appreciate that the unique beauty and strength of our roles as health professionals depends on the linkage between these areas and the natural flow of energy and information from one to another.

Another change that has evolved over the past 20 years and which you will face even more is the involvement of the health profession in a variety of cultural, behavioral, ethical, legal and societal issues. Dr. Reed Tuckson, former commissioner of health of the District of Columbia, said it succinctly and well in an editorial last year in the *Washington Post*: "Health is the place where all of the social forces converge to express themselves with the greatest clarity."

There are a number of concrete examples of this, but perhaps most vivid is the AIDS epidemic. AIDS serves as a powerful reminder of the complex social and cultural environment in which diseases occur and in which we conduct science and/or practice medicine. We as health professionals cannot ignore or flee from the multifaceted problems that have crystallized with AIDS. To borrow an image from Admiral James Watkins, former chairman of the Presidential Commission on the HIV Epidemic and currently the secretary of the Department of Energy, the AIDS epidemic has created the opportunity to view contemporary society through the lens of the human immunodeficiency virus, and has brought into sharp focus many weaknesses and faults in our society.

It has revealed a health-care system

that is overburdened and ill-equipped to meet the needs of vast numbers of desperately ill people. Similarly, our social service and legal institutions are not prepared to cope with many of the difficult issues raised by AIDS. The epidemic has brought to the forefront difficult questions regarding issues of public health and civil liberties, and it has highlighted painful truths about discrimination, poverty and despair. In particular, it has forced a realistic look at the growing threat of the drug use problem as it relates to the spread of the virus as well as in its larger dimensions and implications.

While the AIDS epidemic has revealed disturbing features of our society, there has also been a positive side. It has put us as biomedical professionals in the middle of the story, and it has given us the opportunity to take a lead role in the confrontation and hopefully resolution of some of these societal problems. The solutions that we find will have implications that reach far beyond AIDS. Furthermore, through the "lens of the HIV" we have witnessed remarkable examples of determination, dedication and courage from persons with AIDS, from their families, loved ones, friends and communities, and from health professionals and scientists like those of you who are graduating here today.

What other changes can you expect to face in the years to come? Certainly, the climate in which medicine is practiced has been changing and will continue to change. There is a kind of public schizophrenia about physicians, scientists, health-care professionals, and their capabilities.

On one hand we are looked upon as

miracle-workers. The remarkable progress that has been made in biomedical research and medicine has led many to place undue confidence and unrealistic expectations in the power of physicians and of biomedical science. As a research scientist and a science administrator, I am frequently asked the question, in many cases by congressional Appropriations Subcommittee members, "Dr. Fauci, if we can put a man on the moon, why can't you find a cure for this disease or that disease?"

At the risk of offending any astronauts or engineers that might be in the audience, I only wish that biomedical science were that straightforward. In fact, the more we learn, the more complicated the questions and answers become, both at the bench and at the bedside. We are expected to be supermen and superwomen. Yet the old adage that the "doctor knows best," or even is doing his or her best, is being sharply challenged.

Expectations of limitless competence are coupled with the assumption that adverse outcomes are attributable to malpractice, pure and simple, and not to the severity of the underlying problem, the complexity of the procedure, or even to just bad luck. Despite these potholes in our road, we must not retreat into a defensive posture. Our mission is far too important for that.

Let us turn now to some of those immutable in medicine and biomedical science, those principles that have guided generations of physicians, health-care professionals and scientists, principles that are sometimes forgotten or neglected in the current technologic world of modern medicine, principles that are the foundation of the



All in the family: Rebecca Shore Lewin joins her parents, Miles Shore '55 and Eleanor Shore '54, as HMS alumni.

joy and beauty of our profession. You must be guided by integrity, perseverance, inquisitiveness, and a thirst for knowledge, with the patient being the focus and beneficiary of everything that you do professionally, be you a health-care professional or a basic scientist. If you are a physician or other health-care provider, you must have nothing less than complete commitment towards your patient and establish a relationship based on sensitivity, comfort, compassion, reassurance and respect.

Despite the impressive skills that you have already developed as students, and will sharpen and perfect as house officers in the training programs that most of you will enter, you must realize that you are always learning. Since you are learning, you must be able to say, "I do not know." It is really not that difficult to do. Generations of physicians and health-care professionals before you have been faced with the same humbling experience of going through expensive training only to find out that they really do not know very much.

It may seem obvious, but in this age of high technology we sometimes must be reminded to talk to patients, really communicate with them, take a good history, and do a complete physical exam. When you are stressed and overworked the way you surely will be, it is easy to forget that spending a little time talking with patients and their families may in fact give you even more information than a battery of sophisticated tests. Besides being effective, it is economical. It is one of the few things in medicine that does not cost anything and besides, the complication rate is extremely low.

You will leave here today as professionals in a noble field. You have completed the first phase of a lifetime of learning and you have done so at an exceptional institution. Your choice of this profession by definition mandates that you strive for excellence. You have a very good start.

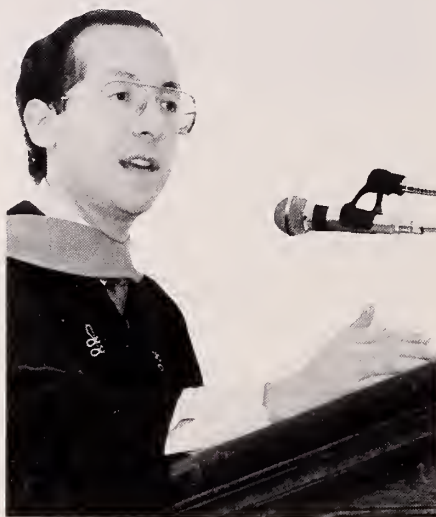
With this commencement ceremony, many new responsibilities, opportunities and challenges are being passed on to you. I hope that you will carry these with pride and conviction, and I hope that you will experience the joy and satisfaction that I have found in our profession. □

Anthony S. Fauci, MD is director of the National Institute of Allergy and Infectious Diseases and of the Office of AIDS Research.

C L A S S D A Y

The Take-Home Lesson

by Lewis R. First



It seems like only 10 years ago since I last stood before a commencement class to address them. When I look back on that commencement, I remember that class like it was my own, and suddenly I realize, it was my own class. So if I am only 10 years out, what am I doing addressing a class almost as old or should I say just as young as I am?

I am not here today to discuss a miraculous laboratory discovery. I have not even cloned genes, although I have told numerous new parents where to buy their infants some jeans. I am here—as many of you have kindly reminded me over the past several months since I accepted your invitation to speak—to supposedly “be funny” and leave you “a message,” or what I refer to as delivering a “take-home lesson.”

Unfortunately my job is not that easy. How can I be expected to impart some words of wisdom to such a diverse and talented group of people as yourselves? That might sound generic, but in fact over the past several years I have gotten to know many of you. I have taught the majority of you. I have certainly learned from you. I have already told many of you all of my very best jokes, and in March at your internship selection dinner, I even danced with

you, although I don't remember doing the lambada with any of you.

So, how do I impart to you a take-home message, since after all, this class, as I understand it, has been through every educational method known. Moreover, studies have shown that different people learn in different ways. Therefore my challenge for today is to find a teaching method that will provide a take-home lesson in a way that you will most remember it. But just what teaching method should I choose?

I thought first about appealing to those of you who learn best via short answer/multiple choice tests, by asking a series of short answer questions such as:

1. Upon graduation, the role model you would strive the most to emulate would be:

- a. Dr. Kildare
- b. Marcus Welby, MD
- c. Dr. Cliff Huxtable
- d. Doogie Howser, MD
- e. All or none of the above

Those of you who like this type of learning, however, might find this question too difficult, since you were probably too busy studying in the library to have made rounds on television with these celebrity physicians. On the other hand, it is important to know who these TV doctors are, since whether you like it or not, they serve as the primary teaching faculty for the community at large.

Ten years ago, I spoke at this podium on the need for all physicians to educate the public and replace the TV doctor—be it in a one-on-one discussion with a patient or before a larger community group. That need to educate still exists, but given the day-to-day demands on all of us as physicians, it is becoming harder and harder, particularly as an intern and resident, to keep up with the perceptions of people who watch these TV doctors. But we must!

As many of you may or may not know, one of my favorite pastimes is playing the board game “Trivial Pursuit.” Recently a new edition of the

game came out—the 1980s edition. As excited as I was to open a new box of questions, I was dismayed to find out how few of those questions I could actually answer. In other words, during my internship, residency and fellowship training, I realized, to my disappointment, that I had missed the '80s!

Therefore my first take-home lesson to you is: don't miss the '90s! You laugh, but you'll be surprised how many of you will be unable to name next year's nominee for Best Picture or the Final Four in the NCAA if you don't make time to take note of what's happening in the world. More importantly, involve yourself in those happenings—be they health- or environmentally-related, social, political or cultural. By keeping up with the rest of the world, you'll feel better about yourself as a person and will be better equipped to understand the concerns and questions of your patients, friends and colleagues.

Well, if short-answer questions are not your favorite way to learn, I have other ways. After four years in the hallowed halls of HMS, I am sure that many of you learn best by, or at least have been exposed to, the Socratic method—otherwise known as the in-



teractive lecture style. The teacher who uses this method asks an audience specific questions that require a response, rather than just didactically lecturing.

For example, how many of you parents and friends here today can tell me what the night call schedule will be for your favorite medical school graduate in the next year? I'll make it easier. How many of you know how much vacation your graduate will get, or how many hours of sleep your graduate will average when on-call overnight at the hospital? I know I can ask your graduate the same questions and he or she will know.

Now, let me ask you graduates a question. How many of you can remember just what day is your Aunt Sophie and Uncle Max's 50th anniversary, or any other special family occasion, occasions that might have been neglected while entrenched in medical school studies and that will continue to be neglected during residency.

Some of you might ask how crucial it is for our graduates and their families and friends to know the answers to these kinds of questions. I will tell you—critical, critical!—especially given the morale issues facing doctors today. In fact, before I reveal the take-home lesson one can learn using the Socratic method, allow me a few moments to further explore this issue of low morale.

Several months ago *The Boston Globe* ran a Sunday magazine cover story entitled "What's Ailing Doctors?", which was written by their medical editor, Richard Knox. Mr. Knox presents a disturbing scenario, in

which many doctors are not happy people any more, and not just in Massachusetts, where the political climate is not warm for physicians trying to practice their trade.

Dr. Robert Blendon, a professor at the Harvard School of Public Health, whose focus is using public opinion polls to track attitudes toward health care, cites five reasons in Mr. Knox's article for doctors being unhappy. These include increasing government intervention with the health-care system, worsening malpractice fears, increasing interference from insurers, keener competition, and a growing perception that patients no longer respect physicians like they used to.

While Dr. Blendon's reasons may be contributing to the general dissatisfaction of doctors-at-large, I believe that these factors are not chiefly to blame for the unhappiness that may already exist at this point in your careers. It is my impression that the dissatisfaction that results in unhappiness, cynicism, and depression early on amongst residents and medical students emanates from such things as the abusive usage of the Socratic teaching method itself.

For example, I might have asked our graduates, "How come you can't remember your Aunt Sophie and Uncle Max's anniversary date? I don't care if you don't have an Aunt Sophie or an Uncle Max. That's no excuse for not knowing. And you call yourself a relative. . . ."

When used without compassion, and as a tool to intimidate and demonstrate superiority of the teacher and



Stephanie searches for graduate-mom, Julie Mack, in the Class Day program.

inferiority of the pupil, the Socratic method can result in medical students undergoing verbal and physical wear and tear in the hospital setting. This in turn sets these students up to face their careers with a combination of insecurity, anger for having to suffer such abuse, and a need for revenge that translates into similar treatment for subsequent medical students and perhaps even patients.

The *Journal of the American Medical Association* in January of this year published several articles on medical student abuse. One from the University of Colorado School of Medicine cites that many of the students who felt they had been verbally abused had received most of it from hospital faculty and residents—residents such as those you are about to become. Is it any wonder that the enthusiasm for medical science, the *joie-de-healing*, and the physician/patient relationship—the things that made you want to enter this profession—are being dramatically extinguished even before you're out of the starting gate?

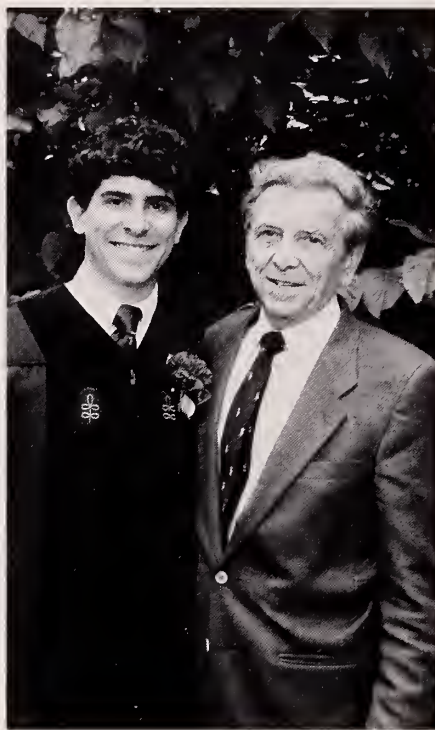
I wish I could tell you that I have a solution to this low morale issue, but if I did, and could solve as well the financial problems confronting medicine today, I would probably be running for governor. Using the Socratic method with compassion and with a goal toward learning is a start, but not enough to combat the rising negative attitudes toward and within our profession.

On the other hand, if we can't cure what's ailing doctors, we can certainly try to prevent it, and the first step to preventing the cynicism and depression amongst doctors in medicine today is to have an understanding support system. That brings me back to take-home lessons and those somewhat Socratic questions regarding night-call and Aunt Sophie that I initially asked each of you.

Parents, spouses, significant others, friends, and even pets must be supportive and understanding of you who are going to be doctors and your soon-to-be different lives. Dr. Arnold Relman, editor-in-chief of the *New England Journal of Medicine*, stated recently that "the public has a great stake in the morale of the medical profession." That means all of you.

Future interns, you must realize the importance of maintaining your support systems that already exist, and you must continue to establish new ones.

You may find this as much of a shock as I did, but hospitals can run without you, but your family and friends cannot, and vice versa. When



Tiron Pechet and his father, Maurice Pechet '48, enjoy Class Day celebrations.

your senior resident sees you slumped down in a plate of mashed potatoes and sends you home, go home! Do not feel guilty! Go directly to home and enjoy the hours you spend there with the people you love.

For me, it has been my wife, family and friends. Without them I could not have survived being a victim to the stresses of the health-care system. As the late and great house officer Judy Garland once said, as she completed an unsuccessful drowning resuscitation on a wicked witch during her internship in Oz, "There's no place like home."

Thus the take-home lesson in regard to learning by the Socratic method is really two-fold. If you use this method, use it with compassion and not as a punishment for those who have to answer your questions, and make sure you establish supports and coping strategies to combat the stresses of residency. In other words, enjoy your home life!

Okay, so you don't like the Socratic method or short-answer questions. Perhaps you might then enjoy one of the most utilized methods of teaching—the anecdotal case-based approach.

How often have you noted that if you can't quote the data, tell a story. It's often just as effective, more interesting than a lot of numbers, and much more memorable. Unfortunately, as much as you may want to wax anecdot-

ally, your patients are still going to want to hear those data, so this method of education is not necessarily the one that is most beneficial for patient care.

But since I can't remember any data regarding commencement speeches, I thought I might try one anecdote regarding my first week of internship. In fact, despite my many hours of sitting in medical school lecture halls learning the pathophysiology of disease, my many different clinical rotations that exposed me to diseases from ABO incompatibility to zinc deficiency, I was totally unprepared for the lesson that I learned in my first week as an intern.

I remember as an intern that I felt obligated to do everything myself. I would work up the patients, do all the procedures, and often even escort the patient from the emergency room up to his or her bed in the hospital, carrying with me any monitoring or intravenous equipment so as not to bother the nurses, aides or patient escorts.

One night I escorted a dehydrated toddler up to the intensive care unit by myself on an elevator we call the "Silver Bullet," because it actually goes somewhat near the speed of the Concorde—once it goes.

In order to spare the extra equipment, I served as the human equipment stand. I held the child's IV bottles and bag of clothing in my hands so his parent could push him in a little wheelbarrow cart up to the floor.

As the elevator opened, the family just stood there, since I had not informed them that we had reached the intensive care unit. They eventually realized that we had reached our desired floor and hustled out just as the elevator doors were closing—with me still in the elevator, holding a bottle connected by plastic tubing to the child's arm.

I leaned to push the open-door button, but it was too late. The doors had closed and the elevator started to move. I watched my IV tubing rise up to the top of the elevator as the car plummeted six stories below.

As I rode to the ground floor, four thoughts crossed my mind: 1. My IV was so good that the tension of the elevator car had literally pulled the child out of his cart and plastered him against the elevator door; 2. My IV was not in well, and the elevator's movement not only had ripped it out of his arm, but resulted in his exsanguination; 3. Maybe I had enough extension tubing to carry me the six floors down; and 4. My career in pediatrics was over.

When the car reached the lobby, the

door opened, my tubing still caught in the ceiling like I was holding onto an emergency pull-cord on the subway. I listened for blood-curdling screams. There were none. Therefore I took a deep breath, pushed the button for the sixth floor, and rode back up to await my fate.

On arrival, there was the child in the cart. The IV had disconnected at the arm site but only a few drops of blood were visible, and there was no exsanguination. Most importantly, there was the parent, who looked angrily at me and said, "Well, are you coming with us or aren't you? How is my child supposed to get better without a doctor?"

There are many lessons I learned from this case—all of which may be useful to you:

1. Oral rehydration can frequently be used as a suitable alternative to intravenous therapy for dehydration. Too bad I didn't think of it in this case.

2. Don't macho out your internship. Work as a team with the nurses, students and families. Having your MD degree does not mean that you must know it all or do it all, although you will often feel like you must.

3. Be there for your patients when they need you and communicate with them. They are counting on you—not so much to have all the answers, but at least to tell them what floor to get off on, and to be their support in a very complicated health-care system.

I'm nearing the end of my allotted time, and I have to leave you with the definitive take-home lesson from the points I've made using various methods of teaching. Maybe it's not as difficult as I thought if I just stay with the words "take-home-lesson." These three words summarize what I wanted to tell you in the first place.

First there's "take"—take notice of the rest of the world outside the hospital and keep up with the social, political, cultural as well as medical climates, not only of the '90s but in the subsequent decades to come.

Then there's "home"—the home and the supports that go with it are critical to your survival, not only in residency but throughout your career. You must have a home life outside the hospital that allows you to establish and maintain your support systems.

Finally there's "lesson"—the lesson, as I demonstrated in my anecdote on the elevator, that despite the class work you've done to this point, the learning is really about to begin. Just because you've got the degree doesn't mean you can't keep learning from

your colleagues, your students, your attendings, and most importantly, your patients. There is a lesson in every patient you care for and if you lose that perspective, you'll lose your enjoyment of medicine.

Sherlock Holmes once said in "The Adventure of the Red Circle," "Education never ends, Watson. It is a series of lessons with the greatest for the last."

Well, you're a long way off from your last lesson, but you're about to begin a great one—your residency! In fact, what you're about to do is one of the most worthwhile, if not the most worthwhile, task you will ever encounter.

If you think of the meaning of each of the words in the phrase "take-home lesson," you will truly enjoy your cho-

sen profession, as I have always and will always continue to do.

I congratulate all of you and your supports on this most wonderful occasion. I now TAKE notice that my time is up. I will think about heading HOME in a short while, and look forward to learning a few LESSONS from all of you, the members of this truly outstanding Harvard Medical School Class of 1990. □

Lewis R. First '80 is an assistant professor of pediatrics at HMS and an assistant in medicine and director of the Pediatric Group Associates (a residents' group practice program) at Children's Hospital in Boston. He is co-author of Pediatric Medicine with Mary Ellen Avery, MD.

C L A S S D A Y

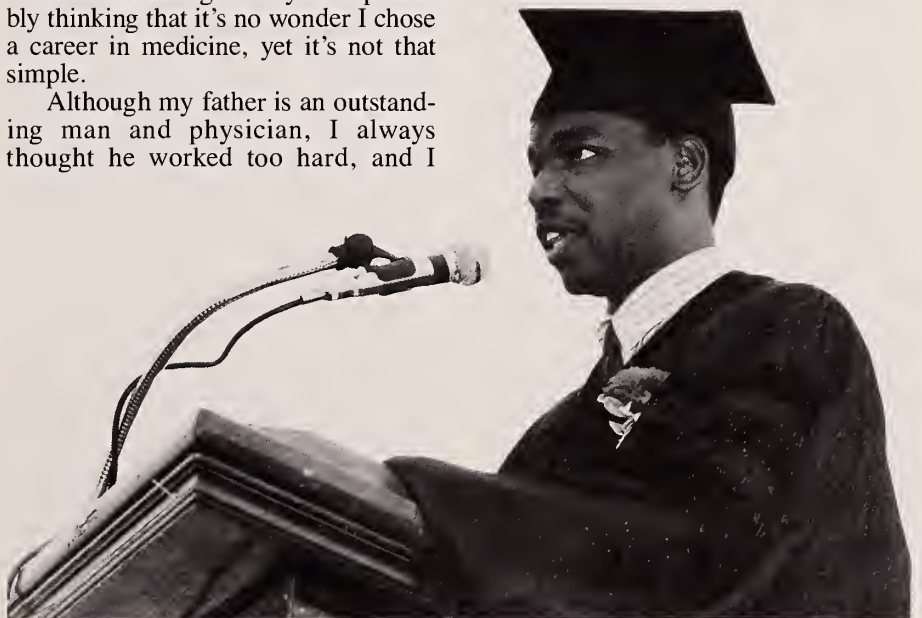
Shedding Illusions

by Daveed Frazier

As a soon-to-be physician I look back on the reasons that brought me to a career in medicine and I'd like to share them with you. I grew up in the Midwest with a terrific family—a father who is board certified in family practice, and with Marcus Welby, MD. With such a background you're probably thinking that it's no wonder I chose a career in medicine, yet it's not that simple.

Although my father is an outstanding man and physician, I always thought he worked too hard, and I

never understood why he wanted to spend his life around sick people. So, I entered Brown University with thoughts of professional photography and philosophy. Yet, I remember Thanksgiving break during my freshman year, when I saw my dad stay up



all night—not because he was deciding where to spend all the money he raked in from the practice of medicine, but because he was deciding what to do for his patient who was on welfare, had five children, and had just been evicted from her home.

At the time I couldn't understand why he bothered himself with these problems for as I saw it, they were non-health related. I quickly learned, however, that the role of a physician was not only that of a healer, but also that of confidant and adviser, and as such, he/she had social and political responsibilities. I couldn't help but respect and envy my father's career, and eventually decided to become a part of this world of medicine.

I entered medical school wanting to be a surgeon. I had visions of heroism. I just wanted to get in there, get dirty, and save some lives because, as Albert Miles stated in 1893, "The emergency warrants a decisive step." I had images of being out to dinner with friends, having my beeper go off, excusing myself from the table, slipping off as if I were Clark Kent on my way to be "Superdoc," hopping in my red sports car and zooming off to the hospital without regard for the speed limit, for I had MD license plates.

Each of us in the class had our preconceptions concerning our future in medicine, yet common to us all was a love for science and a desire to be a part of the most amazing profession on earth.

Once we had made a commitment to ourselves to undertake four years of medical school training, the reality of our decisions came to surface. For me, it was the second day of surgery, after being up for 36 hours, when I was finally ready to take the scalpel and save some lives. But, Dr. Charles McCabe said, "Now son, we can teach a monkey how to operate, but knowing when not to operate is the quality that makes a good surgeon, and that takes years of practice."

Of course I knew he was right, but I was ready to be a hero like my father, John Wayne and Rambo. But that was okay, for I was going to be a doctor, wear hospital scrubs and carry a beeper, so a few sacrifices were understandable.

Then I began reading about nursing shortages, 120-hour work weeks, increasing health-care costs, the risk of AIDS, malpractice suits, etc. And when I did my medicine rotation, I saw for the first time that a doctor who was my role model and had always appeared more than human, was human.



Carola Eisenberg admires Diane Avis's lei as Avis's daughter Enriquetta adjusts her hood.

I saw her cry when a patient whom we had taken care of for nearly a month died, and there was nothing she could do about it. She had given half her life to learn how to help people with physical ailments, but no one taught her what to do when she couldn't win, and no one always wins.

The realities of our career choice were quite real. Yet, what was interesting was that as I watched my fellow classmates having similar experiences, we each became stronger rather than discouraged by all the obstacles. Of course, we each had moments of apprehension. To most of us, just the mention of three simple words was enough to send chills down our spine: National Medical Boards. But we had no regrets for we gained knowledge through our challenges.

In the face of a great deal of obstacles I found strength in the values that originally brought me to medicine. And when I needed more support I turned to my friends and my family, especially my mother, and physicians like Dr. McCabe at the MGH.

As I graduate I am excited that I have the opportunity to help others, for we live in an imperfect world and much help is needed. The long hours won't be too bad, for I know that this is what I want to do and anything else would not be satisfying. The fact is that as a future physician I am not entering a career with a great deal of obstacles, but rather a career with a great deal of opportunities.

As I join with my fellow classmates and prepare to receive the degree of

medical doctor, I realize how very lucky and very special we are—not solely because we are doctors, but because as Harvard Medical School graduates we have had the opportunity to partake in the knowledge, experiences, highs and lows of our teachers and their predecessors. And as important, we have had the opportunity to interact with each other and we are the future.

In the current days of subspecialization, over 80 percent of our class will ultimately specialize. For me, it will be in orthopedic surgery. For others it will range from interventional radiology to adolescent psychiatry. It is important that we never forget, however, that as physicians our responsibility is to the patient as a whole and not just a specific area. The line between surgeon, medical doctor, psychiatrist, and other specialties is not well defined. We will need tools from each of these areas to adequately treat our patients.

Each and every one of us owes it to ourselves and to our communities to be an active participant in the world around us. Only through such participation can we change poverty, racism, world hunger, drug abuse, environmental destruction and the amassment of problems facing us today. As Harvard Medical School graduates we have a great responsibility and that is a great opportunity. □

Daveed Frazier '90 is now doing preliminary surgery at the New England Deaconess Hospital.

The Great Medical School Conspiracy

by Benjamin Scheindlin

A well-known "Far Side" cartoon by Gary Larson depicts a roomful of students taking an exam, No. 2 pencils in hand. The caption reads, "Last page of the medical boards," and we can see printed on one of the test papers the question, "What do you call the little thing that hangs down the back of your throat?" Most people would give this a chuckle. I suspect that everyone has, at one time or another, wondered idly what that little, fleshy oral stalactite is—perhaps a tonsil or an adenoid or something. You can see it when you stare in the bathroom mirror, demanding a convincing explanation for your sore throat, and you can see it when Daffy Duck and Kermit the Frog start yelling. To elevate this near-universal, but admittedly not very engrossing question to the level of bonus question on the National Medical Boards is somewhat amusing.

The medical student's response to the same cartoon is, "What's so funny about the uvula?" Indeed, why is the

uvula more intrinsically funny than, say, the extensor digiti minimi or the vitreous humor or the bundle of His? Clearly something is vastly different about the medical student.

During our four years in medical school—or more typically our five, six, seven or eight years in medical school—we have undergone a striking transformation of how we speak, think and view the world around us. We have changed and the way other people act toward us has changed. If there is a "Great Medical School Conspiracy"—and I have no doubt that there is—it does not lie in a cabal of power-hungry deans attempting to hide the truth from us about John Kennedy or Elvis Presley or Oscar C. Tugo. Rather it lies in all the elements of medical education conspiring together to produce these changes in every medical student.

I first realized something was awry after I had been at HMS just a few months. I recall edifying my brother with some, no doubt prurient, tidbit of neuroanatomic wonderment, saying "such and such is stimulated by the vagus nerve." He replied, "Oh, that's where the slot machines and blackjack tables are, right?" This brought me up short because in 12 weeks of hearing "vagus nerve" every day it had not occurred to me to make the same joke!

Terminology accumulates rapidly in each medical student's head. Everyone knows that physicians use a rich, impenetrable technical language—the better to confuse their patients. This habit is inculcated into students from early on in training. They find themselves compelled to tell everyone they meet about the cremaster reflex and Maple Syrup Urine Disease.

Soon they become like the medical students in *The Pickwick Papers* who, when Mr. Pickwick meets them, are discussing gross anatomy and tucking away an enormous breakfast with equal gusto. "Nothing like dissecting to give one an appetite," says one of

them, who later, as Dickens says, "...enlivened with the brandy, and the breakfast, and the talking, gradually ripened into a state of extreme facetiousness, and related with much glee an agreeable anecdote, about the removal of a tumor on some gentleman's head: which he illustrated by means of an oyster-knife and a half-quartern loaf, to the great edification of the assembled company."

It is with some chagrin that I confess that Dickens's many fanciful and hyperbolic characterizations notwithstanding, his portrayal of medical students is neither invention nor exaggeration.

A less familiar change than the constant discoursing about medicine is the loss of the ability to discuss ordinary topics without resorting to medical language. A medical student with automobile trouble might say, "It's not an emergent problem, so I'll just have the carburetor replaced electively."

Medical students particularly enjoy borrowing medical terms to describe their emotional lives. The human body has a miraculous capacity to compensate for various diseases—that is, to function reasonably well in spite of them. Yet, when the body cannot keep up with the disease, we say that the person has decompensated. Thus, a medical student will report an unexpected encounter with a former par amour like this: "So after not speaking for six months, I ran into her buying a falafel at Sami's and totally decompensated."

In addition to the changes in lingo, the preclinical years induce a change in our perception of the physical universe, cultivating in each student something of the jaundiced eye of the scientist. We learn that the scientific method consists of choosing an assay or measuring instrument, collecting huge masses of data, and then waving your hands to explain the results. The scene is repeated every day for the first two years of medical school.

An instructor gives a lively and absorbing lecture on mucopolysaccharide structure or nontropical sprue, artfully illustrating the major concepts with enough slides to build a bridge from here to the National Institutes of Health. At the end of the lecture, some eager student—you can tell the eager ones because they're still conscious—asks a straightforward question. In reply the professor starts waving both arms vigorously, coming to resemble Pete Townshend playing guitar or Seiji Ozawa conducting the Boston Symphony. "Hmm, probably an immune



complex-mediated phenomenon." Medical students come to recognize hand-waving as the international symbol for "I haven't the faintest idea."

While it is undeniable that the practice of, and the hope for progress in, the medical arts rest solidly on the medical sciences, no consensus exists on how much basic science knowledge a practicing physician needs to have. Some claim that contemporary medical education is too preoccupied with science, to the exclusion of the practical aspects of medical care. One noted Harvard Medical School professor wrote, "The most common criticism made at present by older practitioners is that young graduates have been told a great deal about the mechanism of disease, but very little about the practice of medicine—or, to put it more bluntly, they are too 'scientific' and do not know how to take care of patients." That professor was Dr. Francis W. Peabody, writing in 1927, (which was before I had even taken the MCAT).

Today, practitioners still like to

complain that students are too scientific. They lament that medical students no longer learn the sacred art of physical examination, that they think we rush right off to fancy, high-technology tests like CT scans, magnetic resonance imaging, and the polymerase chain reaction. I endured these jeremiads many times, bamboozled into feeling inadequate.

"Alas!" I thought. "If only I could possess the learnedness of yesteryear as they did in the days of the giants." Then one day it hit me: "Hey, I'm not responsible for the state of medical education in the late 1980s—these attendings are!"

The whole controversy over medical education was put into perspective for me by a conversation I overheard. A classmate and I were travelling by train to our respective homes, having completed one entire semester at Harvard Medical School. A gentleman sat down next to a young man in front of us and struck up a conversation in somewhat stentorian tones, so that snatches of

dialogue wafted back to our ears.

It soon became evident that the young man was a medical student. Inevitably, their conversation turned to the education process itself, with the student describing a pedagogic innovation consisting of small groups in which medical case studies were considered. Receiving one page of information at a time, students in the group worked together to devise a plan for solving the problems presented in the case.

It sounded very much like the medical student was describing the New Pathway curriculum, but my friend and I were puzzled, since we did not recognize him at all. Still, you can't mistake the distinctive features of the New Pathway. We were just wondering whether he could be a second-year student whom we had not met somehow, when his travelling companion loudly and admiringly exclaimed, "Leave it to Tufts to be on the cutting edge of medical education!"

That bit of inadvertent eavesdropping was my first demonstration that the alterations we were undergoing were universal, not some unique process of Harvardization. My suspicion was confirmed during the clinical years, when it became clear that we were all in the same boat, no matter which medical school or pathway we were from.

Third-year students even start the year looking alike: resplendent in short white coats with each instrument nestled in its designated niche—stethoscope strung around the neck, reflex hammer stuck through the buttonhole. At the slightest provocation, the eager and well-stocked medical student can whip out a 125 Hz tuning fork, a pocket EKG machine, or a handy manual of forensic proctology like Batman conveniently producing a Bat-grappling hook from his utility belt in the nick of time.

Actually, the resident is like Batman and the student is his companion Robin. "Holy digitalis toxicity, Batman! I think the Penguin is behind this patient's arrhythmia." You may scoff at the analogy, but many utterances of the true-to-life Batpersons and Robins are no less based on fantasy: "Hmm, probably an immune complex-mediated phenomenon."

Once you have adjusted to walking under the weight of your white coat utility belt, you have to learn to wear a beeper with aplomb. At first, you check your beeper whenever any beeper goes off in the hospital. You may be sitting at grand rounds in a crowded amphitheatre the size of the



Boston Garden, but when you hear a beeper sound across the room you look down at your belt, just in case.

Eventually the time arrives when your beeper does go off but you fail to realize it's yours. The beeping continues longer than is socially acceptable, the speaker pauses, you crane your neck along with everyone else to discover the source of the commotion. Suddenly, capsized in a wave of gratified horror, you realize that the commotion is emanating from your beeper. Nine times out of ten it turns out to be your friend wanting to sneak down to the cafeteria for coffee.

At this point your intern and resident exchange a meaningful shrug that says, "I don't know who's paging the medical student because only we would have a plausible, professional reason for doing so and we're right here." When they do page you, promising some unparalleled educational experience like, "Come on down to the operating room and we'll let you do a brain transplant by yourself," invariably you are stuck in an interminable, students-only lecture on how to tell the difference between pancreatic cysts, pseudocysts, and pseudopseudocysts.

In the midst of getting accustomed to the white coat and the beeper, students are quietly initiated into the cult of the 3" x 5" card. In a tradition passed down from attending to resident to intern to fourth-year student to third-year student, all medical people jot down information about their patients on 3" x 5" index cards. Hippocrates first carved *primum non nocere* onto a 3" x 5" stone tablet, and Maimonides wrote prescriptions for the Caliph of Cairo on 3" x 5" papyrus.

Students also use 3" x 5" cards as crib sheets, on which they inscribe lists of clinical pearls that they might be called upon to recite on rounds. Medical students all cling to the unspoken belief that 99.9 percent of every medical textbook, each one the size of the American bison, is just so much literary fluff that all the material actually useful to the practice of medicine can be distilled out of them, and impregnated onto a handful of 3" x 5" cards.

"Give me a lever and a place to stand, and I shall move the earth!" cried Archimedes. Medical students holler, "Give me enough 3" x 5" cards and I can answer any question the attending might throw at me!" Accordingly, they cover their cards in microscopic handwriting with concise nuggets such as 201 causes of fever, or the complete differential diagnosis of pain.



Class Day co-moderators were Preston Phillips and Eileen Reynolds.

So far I have confined my remarks to the peculiar brand of havoc that medical school wreaks on the students themselves. Not only do medical students find themselves changed, but they find other people treating them differently as well. First come the comments about your handwriting. Then you have to endure hearing "Physician, heal thyself" every time you so much as sneeze.

People are contemptuous of you if they think you study to the exclusion of all else, but if they discover any apparent goofing off they assume you are missing some life-saving knowledge.

A story is told about my own pediatrician, the late Arnold Widerman of Philadelphia. Making a house call, he examined the child and began dispensing advice. The anxious mother, suspicious because he had not actually used a thermometer, demanded, "Aren't you going to take her temperature?"

"I was absent from medical school the day they taught that," replied Dr. Widerman. (I am not certain that the mother was exactly mollified by this dubious confession.)

The strangest change is when people begin taking your medical opinion seriously—usually before you take it seriously yourself. Relatives start to ask about various diseases and they are not just making conversation. Unless, of course, your relatives happen to be physicians, in which case they are just making conversation.

Once a friend called and asked, "What's that condition where pain shoots down the back of your leg . . . begins with an 's' I think? My mother has it."

I said, "Do you mean sciatica?"

"Yeah!" he said. "What can you do for that?"

"Well," I said knowingly, "what did her doctor say?"

"Oh, she hasn't seen the doctor yet."

"Then how do you know she has sciatica?" I asked him.

"You just said so yourself," he told me.

I thought, "Wait a minute. My friend just called with some medical question and all of a sudden I'm in the middle of an Abbott and Costello routine!"

Of course medicine does often resemble vaudeville. People really do come in saying "Doctor, it hurts when I do this," and the best you can tell them is essentially, "So don't do that." When you say, "What brought you to the hospital today?", people really do say, "The bus brought me."

During one medical interview I asked a Jane Austen-reading octogenarian from Cape Cod, "Did you ever have to cut down the amount of alcohol you were drinking?", to which she replied, "Only during Prohibition."

Often it's been the patient's punch lines that have made me aware of how my perspective was becoming skewed. I think that keeping an eyeball on those changes as they sneak up on us is what can save us from being altered beyond human recognition. Leave it to the patients to be on the cutting edge of medical education. □

Benjamin Scheindlin '90 is now a resident in pediatrics at Children's Hospital in Boston.



ALUMNI DAY

New ideas for teaching and academic research seemed to be the theme for Alumni Day this year. Let alone the sun was hot, but also all the talk about the New Pathway, small-group teaching, and industrial agreements for funding research, heated the imaginations of those who remember medical school the old-fashioned way.

Moderator of the morning's program for the Class of '65 was James A. Nelson, professor of radiology and director of the imaging research laboratory at the University of Washington Medical School. For starters, Thomas W. Smith '65, professor of medicine at

HMS, and chief of the cardiovascular division at Brigham and Women's Hospital, provided an insider's view of the development of the New Pathway and the present state of general medical education at HMS.

Stressing the New Pathway's "goal to exercise the student's capacity to think and discover at the same time that facts are learned," Smith remarked that "there is a growing consensus that the skills and attitudes that underlie effective learning, thinking and problem solving are equally as important as the specific knowledge acquired in a general medical education."

Speaking from his 25 years' expe-

rience as a pathologist, Robert L. Trelstad '65, professor and chairman of the Department of Pathology at the Robert Wood Johnson Medical School, spoke about his department's success at doing away with lectures and replacing them with small-group discussions and computer-assisted self-assessment. There has been a marked improvement and enthusiasm among the students who learn pathology in this manner, he said, and most importantly, "students no longer fear big books or computers. Thus while learning pathology, the students became computer literate and competent readers—two skills that will serve them throughout their careers."

Edward M. Scolnick '65, president of Merck, Sharp and Dohme Research Laboratories, offered a few historical examples of how important drugs have been discovered over the past 25 years, and said "that there has been a close link between industrial science and academic basic research, which has been the foundation for many pharmacological discoveries. . . ." He also urged alumni to help convince Congress and the President "of the wisdom of a continuous growth of funding of basic research."

Winner of the Alumni Council annual student essay contest, Eileen Reynolds '90 delivered a stirring account of the lessons her patients have taught her, and of her progression from a patient/student relationship with patients to a patient/doctor one. "Ironically, I discovered that the ideal relationship cannot be called up on demand. . . . I often relied on my patients to lead the way."

Preceding the 25th reunion talks, Dean for Medical Education Daniel Federman '53 formally kicked-off the year-long centennial celebration of the Alumni Association. The first event in the festivities will be "A Morning in the New Pathway," for alumni who want to experience the small-group, problem-solving way of learning medicine. (See story in "Pulse" section of this issue.)

Federman also announced a new prize named in honor of Leo Blacklow '30, in recognition of a Mt. Auburn staff member who is a major teacher of HMS students and residents. The award this year was given to Charlie Hatem '66, assistant professor of medicine.

In another first-time tribute, Federman acknowledged the nourishment and support that Sparr's Drug Store has provided HMS students over the years. He presented owner Arthur Sparr and his wife with Harvard-styled gifts, and thanked them for "doing a lot in silent ways that come out later."

Getting down to business at the annual business meeting, James Adelstein '53, executive dean for academic programs, stood in for Dean Daniel Tosteson '48, who was attending his son's graduation from Milton Academy. After relating some of the past year's milestones, all his talk about transferring duties among the deans inspired Adelstein to quip, "My wife always asks why it takes five deans to do a job that used to be handled by Eleanor Murphy. I never can give her a satisfactory answer."

Joe Murray '43B provided an en-

couraging report on the state of alumni annual giving, saying that this year's drive raised about \$2 million, and that 46 percent of classes contributed.

The meeting ended on a rousing note as outgoing president Claire Stiles '56 handed over the gavel to her classmate Bob Goldwyn '56. He responded that his first act of presidency, "unlike

Roosevelt's shutting down of the banks, but with some drama," was to go behind the curtain to retrieve a gift for Stiles. Goldwyn lamented, however, that the long, rectangular package unfortunately was not what Stiles really wanted—a "centerfold" of Dan Federman. □

A L U M N I D A Y

Latest Strides on the New Pathway

by Thomas W. Smith

I have the daunting task of trying to convey to you the essence of the present state of general medical education at Harvard Medical School. I have had the privilege of participating in recent efforts at curriculum reform as a member of the working group and steering committee for the New Pathway, as chairman of the curriculum committee during five interesting years of the development of the Oliver Wendell Holmes Society, and most recently as chairman of the Council of Academic Societies. What I offer here are a few personal thoughts that certainly should not be construed as Building A policy.

First I'll address the background and rationale for recent efforts to change the scope, style and content of general medical education at HMS. What are current driving forces in medical education? Certainly one that affects us all is the advancing pace of scientific discovery and technological innovation.

Here's a quote: "The phenomenal strides in every branch of scientific medicine have tended to overload it with detail. To winnow the wheat from the chaff and to prepare it . . . for first- and second-year students taxes the resources of the most capable teacher." Who is speaking? Is this Dean Tosteson talking to the incoming class of 1993? No, in fact, it is William Osler in 1899. Neither the problem nor the perception of the problem are new. The fact remains, however, that 90 percent of the scientists who have ever lived are alive today; and no one competing for grant

support (or, for that matter, reviewing the applications) would doubt that fact.

A 1986 study estimated that the number of scientific journals has grown from 4 in 1660 to more than 70,000 today, representing a 1.7 million percent increase over 300-odd years. If one tried to read everything of possible biomedical relevance, one would have to read 5,500 articles per day.

The good news, in a sense, is that only about 500 journals account for 70 percent of the citations in other papers





Dean Daniel Federman '53, William McDermott '42 and James Adelstein '53, who filled in for Dean Tosteson who was attending his son's graduation from Milton Academy.

worldwide—a reasonable way to figure out what's important. In 1983, of 6 million scientific papers cited, 93 percent received only 1 to 4 citations (and I suspect most of those by the authors themselves).

Other driving forces in medical education that many physicians can address knowledgeably include:

- the increasing importance of lifestyle, behavioral and environmental factors in determining health status,
- the aging of the population, with a shift in the burden of illness from the acute toward the chronic,
- an increasing public awareness of the determinants of health and a demand for a cooperative approach to care between physician and patient, and
- the evolving emphasis on cost containment, sometimes at the expense of accessibility to health care, and the increasingly corporate nature of health-care delivery, resulting in complicated financial and institutional arrangements in the complex relationships among physicians, other health-care professionals and their patients.

I move next to a brief history of the "New Pathway," a term that encompasses the important changes in general medical education at HMS from 1982 to the present.

In 1982 Dean Tosteson proposed an innovative pilot project and formed a working group of 12 senior faculty members. In 1983 the faculty approved the creation of a pilot track. Interdisciplinary curricular design groups began intensive planning. By the 1985/

86 academic year the first cohort of 24 New Pathway students—the so-called Oliver Wendell Holmes Society—was admitted to HMS.

In 1986/87 the second New Pathway cohort was increased to 38 students. Faculty representatives from both tracks—that is, the previous traditional track and the new track—met to develop a single set of first-year courses. In 1987/88 the first-year human biology preclinical courses were presented to the entire class in the New Pathway format, and in 1988/89 the Patient/Doctor course was extended to all first-year students. Introduction to Clinical Medicine was re-formatted in a longitudinal fashion.

The faculty approved a new curriculum for years three and four based on the New Pathway pilot clerkships in the 1988/89 year and the initial New Pathway cohort graduated in June 1989.

Last year, the second-year pathology sequence was extended to the entire class, and in the coming year, 1990/91, the Patient/Doctor III and Ambulatory Care clerkships will be extended to all students at HMS.

A guiding principle in the development of the new curriculum has been Dean Tosteson's insistence that the faculty focus on *general* medical education, defined as that body of knowledge, skills and attitudes that all physicians should share before embarking on specialty training. Other guiding principles include, to mention a few:

- equal emphasis on attitudes, skills and knowledge,

- the very careful selection of essential knowledge to avoid information overload,
- the perspective of a single faculty looking at the entire span of general medical education rather than discrete, separate planned curriculum components,
- close student-faculty contact in smaller groups, and
- an environment in which students and faculty learn together.

Further, clinical and basic science elements should be interwoven throughout the four years of curriculum;

- *active* educational methods should be used, such as problem solving and information management,
- approximately one quarter of the student's time over the four years should be available for elective experiences, including an opportunity to pursue a topic in depth and write a thesis, and
- emphasis on skills enabling students to become lifelong learners.

While unanimity can hardly be said to exist on the faculty, there is a growing consensus that the skills and attitudes that underlie effective learning, thinking and problem solving are equally as important as the specific knowledge acquired in a general medical education. While science is the proper language of medicine, lasting elements of medical education include the acquisition of scientific principles and the capacity for scientific thinking—not merely the "facts" extant at a given time. Thus, a principal goal is to exercise the student's capacity to think and discover at the same time that facts are learned. The responsibility for learning must lie with the student.

The curriculum seeks to focus on health as well as disease, and on prevention as well as treatment. The influence of family, society and culture are regarded as important issues to explore in addition to mechanisms of health and disease. The intent is to foster a society of learners by creating an environment wherein each learner creates his or her own curriculum and learning process, so that medical school constitutes a way station in a process of self-education that should never stop.

These are surely not new ideas, but rather established truths that the new curriculum seeks to reinforce. I find myself in agreement with E.M. Forster, who said, "Spoon feeding in the long run teaches us nothing but the shape of the spoon."

I also believe that there is no single approach to teaching or learning that is

best for all students, and hence favor a curriculum that includes many types of educational methods, including lectures, seminars, laboratories, problem-based tutorials, computer-assisted learning and most assuredly independent reading.

An important theme in contemporary science education research is that students store more information in a memorable, easily usable fashion—"meaningful learning" in the contemporary parlance—if they get it by several routes and in an integrated form. The key here is to link the new information to other things students are learning, and in particular to the solution of a clinically relevant problem. Without proper context, it is common for students to do well in terms of passing tests, but what they learn in a given course tends to remain separate from how they make decisions and interpret things in their other activities.

I recently went back to my first- or second-year HMS course notes and was reminded of the four stages of child development articulated by Piaget. The second stage, the so-called preoperational stage, occurs from about ages two to seven and includes language development. Notably, children of this age often participate in what Piaget calls "collective monologue"—talking at people rather than talking with them. The period is marked by egocentricity, creativity and the inception of symbolic thinking.

My own bias is that the HMS faculty, on occasion, has shown certain of Piaget's stage II features. Leaving aside the matter of egocentricity, I refer both to their creativity and their propensity to carry on a collective monologue with students in the large, lecture-room format.

Discussions of the reduction of curricular lecture hours reveal a conviction on the part of many faculty that some well-defined coupling exists between information imparted in a unidirectional manner in lectures, and integrated usable knowledge taken away by students. My own experience in working with students on the wards a year after they had listened to my own and other lectures in cardiovascular pathophysiology—and passed the ensuing exam with flying colors—is that exposure to information outside of a problem-solving or other personally meaningful context does *not*, in general, result in acquisition of knowledge that can readily be recalled in a useful way.

But enough of my biases. What is the structure within which the new curriculum is presented? It includes, importantly, the concept championed by Dean Tosteson of a matrix in which one can imagine a horizontally oriented series of courses, taught largely by traditionally defined departments of the school. These include six preclinical block courses in human biology, of which five are offered in the first year. The sequence includes:

- Cell Biology and Anatomy,
- Biochemistry and Physiology,
- Pharmacology,
- Genetics, Embryology and Reproduction, and
- Immunology, Pathology and Microbiology.

The Patient/Doctor course meets one afternoon weekly throughout the first year and includes history-taking sessions with patients, an introduction

The changes in the clinical curriculum have been rather subtle—operating on the principle that if it ain't broken it needn't be fixed. But there have been some principles that Dean Federman and his colleagues have articulated in planning these third- and fourth-year experiences:

- that we provide a sound general education for all types of physicians,
- that clerkships be more explicit and more objective in the way they address the corresponding curriculum,
- that there be more communication among the various clinical clerkships, and
- that experiences in ambulatory settings be developed to reflect important contemporary changes in the delivery of health care.

Students in the last two years balance providing care with learning. They are at least partially responsible



Clifford Barger '43A talks with Bradford Cannon '33 and his wife, Ellen, as they walk towards the lunch tent.

to health promotion and disease prevention, and tutorials in patient/physician relations.

The second year begins with the last of the human biology blocks: neurobiology, neuroanatomy, neuropathology and psychiatry. It is followed by Human Systems (formerly pathophysiology), a 24-week course on mechanisms of disease organized by organ systems. A continuing longitudinal Patient/Doctor course culminates in an intensive six-week block just prior to the beginning of the clinical clerkships.

for patients but also are encouraged to engage in scholarly activities. There is increased student/faculty contact outside of the setting of the house staff team.

Essential themes of the New Pathway begun in the first and second years continue to be stressed in the clinical curriculum, including health promotion and disease prevention; a psychosocial perspective, which includes ethics; and the integration of basic and clinical science and skills for lifelong learning, including use of computers,

critical literature appraisal and self-assessment. Students on clinical clerkships in teaching hospitals go off-site for one session each week in a continuation of the longitudinal Patient/Doctor course.

Much as before, there are 23 months in the third and fourth years, beginning in July of the third year. The required core curriculum comprises 13 months, the order of which is not prescribed. Medicine includes three months, divided into a two-month basic clerkship and a separate advanced month. The remaining core clerkships are:

- Surgery (two months),
- Neurology, Psychiatry and Radiology (one month each),
- Women's and Children's Health (three months), and
- Ambulatory Care (two months).

The Women's and Children's Health clerkship, which began with the initial

master, a group of senior fellows representing all elements of faculty scientific and clinical interests, a group of more junior faculty designated as course tutors, and 30 to 40 students from each of the four classes.

The societies are responsible for the integration, coordination and implementation of the four-year curriculum in general medical education. They are also the vehicle for increased student/faculty interaction through formal and informal activities, such as journal clubs, curricular feedback luncheons, invited speakers, student-initiated elective projects, and even pizza parties. The societies are named the Walter Bradford Cannon Society, the William Bosworth Castle Society, the Oliver Wendell Holmes Society, the Francis Weld Peabody Society, and the group representing the joint HMS-MIT Health Sciences and Technology program.

I must digress for a moment regard-

age 92, to be as active as he would like in the affairs of the society.

"Dear Tom," he writes, "You were kind to write about the Castle Society, your connection with which I had read of in the recent issue of *Focus*. Kindness may have gotten the better of judgment in this award. Or so I can only surmise as I read the names of those great medical forebears given to the other academic societies. With every good wish to you, Bill."

A continuing challenge is how best to judge the success of our education efforts. Is it reflected by National Board scores? In the ratings of courses by students? In the fraction of our students who pursue academic careers, or make noteworthy contributions to basic or clinical science, or provide important leadership in health-care delivery? Clearly, each of these yields an incomplete assessment. I believe we will do well to accept the fundamental subjectivity of such judgments, and heed the aphorism of Rene Dubos, who observed, "The measurable drives out the important."

In closing, I quote Dean Tosteson's own words on the New Pathway: "In the tradition of science, exploring these new pathways raises more questions than answers. The project is best viewed as a renewed commitment of the Faculty of Medicine at Harvard to continue searching for better ways to prepare young doctors for careers in medicine and the medical sciences.

"The stakes have never been higher. The discoveries of modern science and the technologies that they spawn are providing physicians with increasingly potent tools. They also generate an industry that makes the practice of medicine more complex and costly. These developments are making it more difficult for doctors to provide patients with the personal attention that they want and need. These issues will occupy our graduates in the years to come.

"Our job as medical educators is to help students develop the personal responsibility, the skills, and the framework of knowledge that will enable them to continue learning about the problems they will face during their professional lives. To do this well, in these rapidly changing times, will require our utmost effort and ingenuity." □

Thomas W. Smith '65 is HMS professor of medicine and chief of cardiology at Brigham and Women's Hospital.



Incoming Alumni Council President Robert Goldwyn '56 presents his classmate and outgoing president, Claire Stiles, with a gift.

New Pathway cohort of students, will replace the independent rotations of pediatrics and obstetrics and gynecology. The Ambulatory Care clerkship, also piloted within the New Pathway, is required for the class of 1992 onward. In addition, there are 10 months that are largely elective, or at least selective. There is an advanced science requirement, or alternatively an independent research project.

Now imagine, if you will—having considered these courses running in a horizontal dimension of the matrix—a vertical series of elements, called academic societies. The societies comprise a senior faculty member as

ing the William Bosworth Castle Society. Dr. Castle has been one of my heroes since I first met him while doing a student clerkship in hematology at the Thorndike Laboratory at Boston City Hospital. I was delighted, therefore, when we reached the decision to name one of the academic societies in his honor, and wrote him a note to say so. He sent a note to me in reply that is so characteristic of the modesty of the man that I wanted to quote from it today. I called Dr. Castle yesterday to ask for his permission. He graciously acceded to my request, with the proviso that I apologize to the members of the Castle Society for his inability, at

Robbins in a Box

by Robert L. Trelstad



In the April 1990 issue of the *Journal of the American Medical Association* the editor, Dr. George Lundberg, indicated that the publication day of *JAMA* had been moved back from Friday to Wednesday to allow readers to receive the journal well in advance of the cover date, and thus preclude the dilemma of explaining a news report before the physician has had a chance to read the article. An article in *The New York Times* last month entitled "Medical Data: Who should hear it first?" dealt with the delay that traditionally occurs between completion of a medical study and its publication.

One conclusion from these anecdotes is that medical information is a desired, even hot, commodity. Indeed, information, not only in medicine but broadly, is becoming the coin of the realm. Surrounded by complex technical devices and procedures, the operative question today is not, "Is the device or procedure available?" but, "What useful thing can I do with it?" Doing a hysterectomy is relatively simple; knowing why and when to do it requires information.

The information we must now manage has grown in our lifetime in a manner often described as explosive. I would rather describe it as abundant or

glorious, and let the descriptor convey the excitement our current knowledge of biology provides. Our present and future successes in unraveling the biological elements of medicine require that the education of physicians include the development of skills for the collection and management of information.

The lecture is a venerable activity, loved by faculty with a passion that cannot be taken lightly. It is an opportunity for demonstrations of knowledge and spirit as well as technique. But the lecture is usually a monologue, a one-way transfer of information. It is an activity that is constrained by space and time and, in many medical schools, poorly attended and often accompanied by a tape recorder from the students' note-taking service.

I'd like to tell you what happened when we eliminated lectures from the pathology course at Robert Wood Johnson Medical School and substituted reading, small-group discussions and computer-assisted self-assessment.

The textbook we required was Robbins, and all students bought the book and had it available on their personal

computers, for I was able to convince the publisher of Cotran, Kumar & Robbins, W.B. Saunders, to release the text to me in its entirety in digital form.

Thus I speak to you today about teaching pathology without lectures and with Robbins in a box. And just this week I received *The Merck Manual* in digital form. Both of these textbooks will now be available on the computer in an interactive and rapidly searchable HyperCard stack, which I have written.

Pathology is a medical discipline in which the primary focus is on molecular and cellular mechanisms of disease, and on the detection and classification of diseases using laboratory methods. I personally have spent the majority of the last 25 years pursuing the molecular and cellular reactions of mesenchyme cells, with particular attention to morphogenesis and repair reactions.

In all medical schools pathologists play a central role in bridging the basic science and clinical disciplines. While pathology is at the center of the scientific practice of medicine, it is not a popular specialty, and currently only about 1 to 2 percent of American medical school graduates select it for their first post-graduate residency training.

For the last nine years I have been chairman of pathology at Robert Wood Johnson Medical School in Piscataway/New Brunswick, New Jersey.

When I moved to Piscataway in 1981, the course in pathology was taught in the first semester of the second year to 150 medical students in a traditional lecture/lab routine, and covered both general and organ-specific pathology. In 1986 we eliminated lec-



tures and expanded our small-group teaching to enhance time spent in problem solving. We also implemented a number of computer-based self-teaching and self-assessment tools, some of which we obtained from the National Library of Medicine, some were purchased from the Universities of Iowa and Utah, and some I developed myself and are now available through Keyboard Publishing.

There were a number of immediate consequences of eliminating the lectures. There were no handouts and no note-taking service. There were no complaints from the faculty that the students were not at lecture, and there were no complaints from the students that the lecturer presented what was either in the book or in the handout or what he or she was doing in the laboratory. What we found among the students was a new learning dynamic based on formal and informal small-group sessions and centered on the textbook. Discussions were focused on understanding the subject, not simply defining it, and then using that understanding in solving clinical problems.

Our students have access to approximately 5,000 multiple choice questions in pathology, most of which our

By these and other criteria, all students have profited by this new approach. Nearly all students agreed by the end of the course that they no longer feared big books or computers. Thus while learning pathology, the students became computer literate and competent readers—two skills that will serve them throughout their careers.

Additionally there have been more students choosing pathology as a career. The program has been in effect for four years; two classes have graduated and are now PGYIs and PGYIIs. Five percent of each class in the last two years have chosen pathology for their residencies, and at present there are three of our graduates at the Beth Israel, two at the Mass. General, one at the NIH, four at NYU, two at Cornell, two at Northwestern, and one at Robert Wood Johnson University Hospital.

What about the faculty? By and large, there has been satisfaction with the program, and the faculty agree that communication of information does not require lectures. Moreover, they have found that a lightened lecture load and the greater importance of small-group sessions have increased, not decreased, their contacts with students.

An essential element in our success, I believe, has been self-assessment provided by banks of questions and images present in various computer programs and video discs. While many have talked about the uses of computers in medical education, the truth is that few institutions have implemented them in any meaningful manner.

A fundamental error in the implementation of computer-based learning is to separate form from content. The content expert must also be an expert in form. This means that the teacher must either write the programs he or she uses in teaching, or must use adaptable or modifiable programs to fit his/her specific needs and course structure. Can you imagine asking the audiovisual department to put your slides in order for a presentation? Hiring a computer programmer to write your teaching exercise is neither necessary nor a very good idea.

HyperCard is easy enough to learn that I discount anyone who says they can't. I have gotten into trouble with the apparent arrogance of that statement, but consider this: are you going to train an individual to pass a catheter, remove a tumor, transplant an organ or administer a drug who is expert in form or technique but not in content or purpose, or vice versa? Why should we expect ourselves to behave any differently in our educational activities from

how we behave in our clinical or research activities? If the computer is going to become a useful tool in our teaching environment, it must be as comfortable in the hands of the teacher as the scalpel is in the hands of the surgeon.

The approach that we have taken in pathology can apply to every one of the traditional preclinical courses. I believe it would be possible to teach anatomy, histology, cell biology, pharmacology, physiology and microbiology without lectures based on textbooks, but with small groups and computer-based images, exercises and self-assessment. The opportunity to implement such a change, however, will require a political effort that few deans or schools are willing to muster. As I reflect on the New Pathway that Dean Tosteson has championed, I realize the enormous barrier that was overcome here to put the New Pathway into place.

Let me close by shifting focus to another curriculum reform based on the autopsy, which I believe could provide a real case-based structure to the preclinical years, and address a major problem in outcome assessment.

At present, the autopsy rate in the United States is less than 10 percent. Simply put, 9 out of every 10 individuals are buried without anatomic and/or chemical evaluation of their status at the time of death. This situation persists despite repeated studies that suggest that as many as 10 to 15 percent of individuals die with undiagnosed, treatable disorders.

If you add to that statistic the data from the recent study from the Harvard School of Public Health about medical misadventures and/or malpractice in the state of New York, I would, to paraphrase Bob Dylan, suggest that you don't need a lawyer to know which way the wind blows.

The reasons for the decline in autopsies have been studied and published repeatedly. Despite this, I see little movement toward change. I propose several solutions. One is simply to stop doing autopsies. Many look at me askance when I suggest that, but the truth is, we're close to that point now. A second suggestion is one that I make with the fear that it's going to come true. I open the pages of the newspaper and there stands an ad proclaiming: "Do you want to know why your mother died? Call Acme Autopsy Service for fast, confidential results."

Is there a reasonable alternative to simply ceasing autopsies or entangling them in litigious pursuits? I have given considerable thought to this question



Leo Blacklow '30

faculty have written. Our students learn by their mistakes and by their successes. Since eliminating lectures, our students have risen to the top 15 percent of the country in pathology, based on the National Boards, and we have seen a striking improvement in the strongly performing students and a smaller, but encouraging improvement in the weakly performing students.

because the data available on outcome incontrovertibly support the value of the autopsy; and second, I have personally witnessed over the past 25 years the consequences of malpractice, both in the autopsy room and repeatedly as an expert in the court room.

As an alternative, I propose the establishment of regional autopsy centers, based primarily at medical schools. At this regional autopsy center would be the usual support staff, pathology residents and pathology faculty found currently in our hospitals. Every school in the country currently has an available site for conducting these autopsies in the facility used to teach anatomy. The service would provide prompt and timely autopsies for our teaching hospitals, community hospitals, nursing homes, physicians and families.

I would use the regional autopsy service to teach relevant medical anatomy, histology and pathology beginning with first-year students. I can imagine a case-based program that would involve the biological questions posed and demonstrated at the autopsy. Gone would be the cadavers and the canned case studies, which are devoid of lifelike qualities. In their place would be Mr. Jones who died yesterday.

In the fall of 1973, with support from the Commonwealth Fund, I taught gross anatomy to Stanford medical students using the autopsy service at Stanford. I saw firsthand the potential for this type of teaching, not only of anatomy, but of other preclinical topics. With the importance of imaging techniques and image-based anatomy, the regional autopsy center would be appropriately equipped to generate and/or receive appropriate images of each case prior to dissection.

Patients donate their bodies to medical schools for anatomic study, and some of these are considered unsuitable for a variety of reasons. There are no cases that are considered unsuitable for an autopsy. Moreover, the teaching of normal anatomy in a circumstance where abnormal anatomy is present is probably the best context within which to learn the subject.

Arguments can be raised against this idea, including fiscal, logistic and legal ones, desires of clinicians to have the autopsy in the hospital, dangers to the students, and the rights of the deceased. The fiscal, logistic and legal issues are, in my opinion, soluble. There currently is a large, nationwide funeral business which transports, dissects and embalms the newly dead.

Integration in some manner with this activity to provide for better medical education and better outcome analysis in our medical system is possible and ought to be explored.

The need for a clinician to attend all aspects of the autopsy is modest. The results and tissues from such cases would be presented back at the hospitals in a timely and appropriate fashion and in a manner already widely employed.



The imagined dangers of the autopsy far exceed the reality. The danger to students is less than the dangers they will encounter on the wards or even in driving to school. In all my years in handling human tissues from surgicals and autopsies, I've always exercised care. But, I've always felt that my greatest contribution to medicine would be to catch something from a tissue that wasn't known to be contagious, and then to prove it was.

That the autopsy has to be properly introduced and conducted is essential. As I watched the six-hour television program from Beth Israel by Frederick Wiseman entitled *Near Death*, I felt the students, house staff and attendings all had a consistent and proper attitude toward the patient from the time of their arrival on the ward to the scenes in the morgue and autopsy room. I do not believe that we dishonor the dead by moving them within the hospital nor between buildings. I would expect the same ethical behavior at the regional autopsy center that I expect in the autopsy room now.

In discussing the elimination of

lectures, I have been surprised at the conservative reactions from colleagues, both within and outside of pathology. It won't work at our school or in our department, they argue, and what follows are remarks that I feel are mostly defensive. In discussing the proposed curriculum reform based on a regional autopsy service with colleagues and foundations, I have encountered a similar kind of conservatism.

When I finished writing these re-

marks, I showed them to Barbara, my wife of nearly 30 years. When she finished reading she handed me that day's edition of *The New York Times* opened to the editorial page, where Derek Bok was taken to task for not actively using his pulpit during his 20 years as Harvard's president. With delight she remarked, "No one will accuse you of the same reluctance, and you've only been given 20 minutes."

With pleasure I stand guilty as judged, but with the satisfaction that some of my thoughts about scholarship and service in medicine could be heard within the shadows of these buildings, by my classmates, by the faculty and by many others who preceded us and who follow. □

Robert L. Trelstad '65 is professor and chairman of the Department of Pathology at the Robert Wood Johnson Medical School in Piscataway/New Brunswick, New Jersey. He trained in pathology at Mass. General Hospital and was on the faculty at HMS until 1981, when he assumed his present position.

Collaboration in Pharmaceutical Discovery

by Edward M. Scolnick



since my graduation. Some of these therapeutic discoveries have been made by a process that simply built upon the foundation of knowledge that existed in a given field. However, some drug discoveries have a more easily traced link between industrial laboratories and academic research.

I'll begin with streptomycin—a very old discovery, the story of which is well known in microbiological circles. Selman Waksman was a young microbiologist working at Rutgers University. Following on the heels of Fleming and Dubos, Waksman had clear ideas on how to isolate new antibiotics from soil-derived microorganisms. He conveyed his ideas to Randolph Majors, then head of research at Merck. The Merck Laboratories were also working in this direction, but had not yet discovered a safe, new antibiotic.

With foresight, Majors was willing to make available to Waksman the resources and expertise of Merck's microbiology and isolation chemistry groups to allow Waksman to explore fully the applications of his ideas. The intellectual compatibility of the two laboratories was clear from the beginning, as was the research goal.

The initial antibiotic isolated, streptothricin, was effective but failed to meet safety tests. In 1943 streptomycin was isolated from an actinomycete, and in less than two years its medicinal potential was recognized. Clearly in this discovery, Merck would not have been the leader had it not been for Waksman's contribution, and Waksman would not have succeeded without the collaboration with Merck. In this case, the transfer from academic science to drug application actually involved an intimately focused university/industrial collaborative arrangement.

The case of Mevacor® is an even more complex example of the interde-

pendent nature of research carried out around the world in academic and industrial laboratories. Mevacor® is a specific, potent inhibitor of the rate-limiting enzyme in cholesterol biosynthesis, hydroxymethylglutaryl COA reductase (HMG-COA reductase). The description of this enzyme, and the elucidation of the metabolic pathway that the body uses to synthesize cholesterol from small water soluble precursors, required several decades of work. Not until 10 years after the elucidation of the correct structure of cholesterol in 1932 was there a major insight into its biosynthetic precursors. Konrad Bloch, then at Columbia, determined that acetate, a two-carbon molecule, was a precursor of both the tetracyclic cholesterol molecule and its aliphatic side chain.

During the next decade, Bloch at Harvard and Feodor Lynen at the Max Planck Institute further elucidated the chemistry of the pathway, and the broad outline was clear: acetate to squalene to lanosterol to cholesterol.

A major puzzle remained. The key structures that connected acetate to squalene were unknown. As chance would have it, three years later in the Merck Laboratories Karl Folkers and Jesse Huff described the structure and chemical role of an "acetate replacing factor" as a serendipitous observation, while they were searching for a vitamin in an *lactobacillus* microorganism. The new molecule, mevalonic acid—a six-carbon product of acetate condensation and modification—was discovered in 1956 and was shown to be a critical biosynthetic intermediate in the pathway from acetate to cholesterol.

This knowledge was quickly exploited and led in the late 1950s to the description of the microsomal enzyme, hydroxymethylglutaryl COA reductase (HMG-COA reductase), a key enzyme in the synthesis of mevalonic acid from acetate. HMG-COA reductase was identified and shown to be the rate-limiting enzyme in cholesterol biosynthesis, thus establishing the enzyme as a potential target site to interrupt cholesterol biosynthesis.

It was not until 20 years later, however, that Endo and his colleagues in Japan discovered Compactin from a soil microorganism, the first potent and specific inhibitor of HMG-COA reductase. However, Compactin was later shown to be toxic. Recognizing the importance of Compactin, Al Alberts and his colleagues at Merck quickly capitalized on this observation to discover Lovastatin, a related but novel HMG-COA reductase inhibitor.

In the last eight years, as I have learned the field of pharmacology and relearned many aspects of medicine, I have been struck by the vast changes that have taken place in our ability to treat disease in the 25 years since I graduated. Since joining Merck I have learned the history of the discovery of many of their drugs, and it has become clear that there has been a close link between industrial science and academic basic research, which has been the foundation for many pharmacological discoveries both at Merck and at other companies.

To begin I'd like to summarize briefly some of the major additions to therapeutic medicine over the past 25 years, and to review a few of the historical industrial-academic links that have led to some important discoveries of drugs. Since I know the Merck examples best, I will lean heavily, although not exclusively, on those.

Clearly the face of therapeutic medicine has been dramatically changed

Another decade later, Lovastatin became the ethical drug, Mevacor®. Mevacor® was licensed in August 1987, and has proven to be a safe and highly effective way to lower elevated cholesterol.

I'd like to draw my next example from our competitor, Squibb, located a few miles south of us in New Jersey. Squibb's story of the discovery of Captopril® is an equally elegant episode. This time the tale starts in Sao Paulo, Brazil at the University of Sao Paulo Medical School, where a factor in the venom of a South American snake, Bothrops Jararaca, was shown to potentiate the physiological effects of bradykinin, a peptide hormone that dilates small blood vessels.

Three years later, the so-called bradykinin potentiating factor was shown to be a potent inhibitor of the enzyme called angiotensin converting enzyme, the enzyme that generates the molecule angiotensin II from angiotensin I. Since angiotensin II was known to be a potent regulator of blood pressure, the work caught the attention of Ondetti and his colleagues at the Squibb Institute.

In 1971, they purified the peptide inhibitors in the venom and identified their amino acid composition and sequence. Six years later, Ondetti and Cushman announced the successful design of an orally active ace inhibitor derived by a series of elegant chemical design steps from the venom-derived peptide.

Once again, the success of the Squibb group in designing Captopril® shows the importance of the work in Brazil. The Squibb scientists expanded their own basic research program and in the end, contributed an important new principle to antihypertensive therapy.

The last example I would like to recount is the background to Merck's latest exciting enzyme inhibitor, Proscar®. Proscar® is a potent competitive inhibitor of an enzyme called testosterone 5 α reductase. The enzyme converts testosterone to dihydrotestosterone (DHT). In 1966 Merck began a program to study endocrine approaches to the treatment of acne and benign prostatic hypertrophy. The initial research plans concentrated the effort on various steroid antagonists, either anti-androgens or anti-progesterone agents.

By 1970, the field had progressed to the point where dihydrotestosterone rather than testosterone was recognized as probably the key hormone permissive for prostatic hypertrophy. Merck Labs was beginning to think

about either antagonists of dihydrotestosterone or inhibitors of 5 α reductase that would block the synthesis of DHT.

The key observations this time came from two sources: work in Dallas by Patrick Walsh and Jean Wilson at the Southwestern Medical School, and a group at the division of endocrinology at Cornell University Medical College led by Julianne Imperato-McGinley. In 1974 these groups reported the study of a genetically-transmitted disease in which genetic males appeared to be females according to their external genitalia. They discovered that these patients lacked the enzyme steroid 5 α reductase. Importantly, the males' prostate glands remained small, and the other characteristic was that the genetic females who had deficient 5 α reductase were completely normal.

Thus, Merck scientists concluded that a specific inhibitor of 5 α reductase would be a safe way to lower DHT in adult males, and postulated that lowering DHT would also shrink the size of an enlarged prostate gland in benign prostatic hypertrophy. More than a decade later, Proscar® emerged from the Rahway basic chemistry department.

In the last few years, Proscar® has

been shown to be a safe, specific and potent inhibitor of 5 α reductase in adult males, and to shrink enlarged prostate glands of 30 to 60 percent of men with advanced BPH disease. Proscar® is now in the late stages of clinical development and will be Merck's next important drug.

I have cited several examples to illustrate the importance of an awareness in industry of the worldwide output of academic science to the discovery process in pharmaceutical research. Seminal discoveries have come from numerous places in the world: Sao Paulo, Brazil, New York, northern New Jersey, Tokyo, Dallas, and Munich. The geographical and institutional heterogeneity become even greater with each new example. In each case any attempt to predict where or by whom such rewarding basic research discoveries might have been made would have been as difficult as predicting where a roulette wheel might stop.

Thus, it is clear that successful management of industrial research is dependent on rapid access to the latest discoveries in academic laboratories, the ability to recognize the importance of a given discovery, the ability to inte-



Frank Lepreau '38 makes a point to J.S. Cheever '36 during intermission.

grate the information into research programs within an industrial laboratory, and the ability to focus the effort to allow maximum chance that the idea will bear practical fruit.

The other clear lesson is that it is vital for an industrial laboratory to have its own cutting-edge basic research program at early stages of newly evolving fields. If Merck had not had an ongoing research program in cholesterol biosynthesis, too much time would have elapsed before Merck could have capitalized on Endo's observation, and the patent for Mevacor® would have gone elsewhere.

justed for inflation and expressed in constant 1989 dollars, this plot is much more revealing. The first clear point is that the funding growth is really discontinuous. In fact, there appear to be three large spurts interspersed with long intervals of relatively flat funding.

The three large increases coincide with three particular events. In the late 1950s the tremendous increase in funds, in fact about 50 percent of the current constant level of funding, was clearly a reaction to the Soviet Union's launch of Sputnik. Driven by the fear that the Soviet Union would leap ahead of the United States in science and

In the last 30 years only large causes have led Congress to loosen the purse strings on funds for biomedical research. The industrial research community has an obligation to the public at large and to itself in particular to help the academic community convey its message of the need for a more stable pattern of growth in research funding. In order to remain competitive, the U.S. pharmaceutical industry and U.S. industry in general clearly need the flow of information from academic laboratories.

Furthermore, we need a constant flow of bright, well-trained students graduating from these laboratories. The examples I have cited illustrate the importance of the academic enterprise to the pharmaceutical industry, but I am sure that the same principles apply to all industrial research.

Therefore, I would propose that one of the most important responsibilities of the industrial research community is to aid the academic community in convincing Congress and the President of the wisdom of a continuous growth of funding of basic research. Looking at the drugs that have emerged in the past 25 years, we can clearly illustrate the many tangible benefits that have derived from funded research.

I find that some academic scientists simply do not have the knowledge of specific industrial accomplishments to bolster their own lobbying efforts with concrete examples. It is clearly in our own interest, and in the interest of the American public, to aid them in their efforts.

Many academic and industrial scientists have pointed to the ever growing danger this country faces because of the U.S. educational system failing to produce enough people well educated in science and technology. Already we are not producing enough of our own PhD-level scientists. And, with the incredible cost now of medical education, there are strong financial pressures that weigh against a young medical doctor learning to do basic research, as so many of his or her predecessors used to do. When one recognizes how the contributions of basic research have been turned into so many tangible health benefits for society, it is hard to comprehend why the federal funding of biomedical research has not grown in a more orderly way.

We have an obligation in the coming decade to educate the appropriate people in Washington about the past benefits and current opportunities that have originated from academic basic



Dean Daniel Federman expresses his appreciation to Mr. and Mrs. Frank Sparr, owners of Sparr's drug store.

Having made a case for the importance of academic research to discoveries made in industrial research, I want to explore the issue of funding in our country for academic biomedical research. Since the success and expansion of academic biomedical research is so vital to the discovery process for new ethical drugs, we must be sensitive to the health of the academic enterprise.

Let's consider for a moment the funds available to the National Institutes of Health in the last three decades. Funding has increased from \$127 million per year since 1957 to over \$6 billion a year in what appears to be an impressive and continuous manner.

However, when the dollars are ad-

justed for inflation and expressed in constant 1989 dollars, this plot is much more revealing. The first clear point is that the funding growth is really discontinuous. In fact, there appear to be three large spurts interspersed with long intervals of relatively flat funding.

Then in 1970, Richard Nixon declared war on cancer and an upward slope in funding once again occurred. From 1977 to 1981 or 1982, funding increases have again failed to occur, and in real dollars have actually declined. Between 1982 and 1986, the slope turned up again, spurred by the fear of the modern epidemic, AIDS. The curve, however, has been flattening again in the past two years.

research. If we can do so successfully, we will have given the American public a legacy of innovation far greater than that encompassed in the individual therapeutics we have discovered so far. □

Edward M. Scolnick '65 is president of Merck, Sharp and Dohme Research Laboratories. Before joining Merck in

1982, he carried out basic research at the National Institutes of Health, where he discovered the ras oncogene and elucidated its genetics and biochemistry in model systems and human cancer. He expresses special gratitude to Boris Magasanik, MD, who used to be on the HMS faculty, and E.C.C. Lin, MD of HMS for introducing him to the excitement of basic research.

ALUMNI DAY

Patient Wisdom

by Eileen Reynolds

I hope that someday, when I get better, you can be my doctor." Marjorie, a brave woman whom I'd known from the week she was diagnosed with CNS lymphoma, said this to me months after my neurology clerkships had ended, and just a couple weeks before she died from the lymphoma's cruel, meningitic spread. She was the patient with whom I have had the longest relationship during these four years, a patient who taught me much about life, death and doctoring.

Yet the relationship I had with Marjorie was not the patient/doctor relationship that I've learned about week after week in our Patient/Doctor course, it was much different. It was a patient/student relationship—something I was not ready for when I admitted her, my very first patient of my very first clerkship. It was this patient/student relationship that all medical students learn to navigate without the benefit of formal teaching. My path was one I learned from my patients.

Rose lived in the North End. She had diabetes and its complications, a husband with a brain tumor, a morbidly obese and clinically depressed daughter, and a gift for teaching. I met her in my first week of medical school on an assigned home visit. Greener than green about medicine, I was supposed to go to her house to learn about the effects of chronic disease on her life. Listening, as I have since learned in my Patient/Doctor course, is a skill that we must practice.

Listening was all I knew how to do that day, and Rose taught me that for a

student, listening is the best therapy to minister. For five hours on a Friday afternoon she talked to me about feeling trapped in her apartment by her angina and her claudication, about the shame of not being able to take care of her own house, and about the weight and the responsibility of being the strong one in the family despite her conditions. Then she told me that she had agreed to have me to her house so that she could pass on some suggestions about doctoring. She'd had a lot of doctors and knew what she was talking about.

She told me about my preceptor, who had sent me to see her. She admired his professionalism, his respect for her and the distance he seemed to keep in their relationship. She had sought a doctor who was, as she put it, proper. She'd had two doctors who were not. One was an infertility specialist, who had demanded that before he go on with the work-up, she bring her husband in with her so that they could demonstrate their technique for the doctor's inspection. Another was an internist, she said, who fondled her repeatedly.

Rose had never told anyone these stories—not her husband, her friends or her doctor. She was telling me as a gift, as her contribution to my education, and because I was just starting out in search of ways to relate to my patients. She told me because I was a student and we had a patient/student relationship, and because she thought I would listen and learn from what she had to say.

Nearly two years of medical school went by. We learned basic sciences and pathophysiology, and we went to Patient/Doctor and Clinical Skills every week. In Patient/Doctor we talked about ethics, economics and interviewing. We tried to imagine what it would be like to make important decisions, to forge longitudinal relationships and to feel adequate for the task. Meanwhile, we were practicing our clinical skills and learning the physical exam.

Our patients were sick and hospitalized, but usually they were willing to give the gift of time and discomfort for repeated poking and prodding from students and preceptors. I felt extraneous, disconnected, out of place and imposing. I often couldn't answer simple questions or percuss the largest liver. I felt like the relationship was a lopsided one—the patients did the giving, and I did the taking.

When I entered the clinical years I really thought I had it together, and that I was ready to hit real life on the wards. With a smooth physical exam, a practiced interview technique and attention to detail, I'd be able to take good care of my two or three patients. In reality, I had a long way to go with the patient/student relationship.

Marjorie was my first hospital patient. She had noticed a bit of weakness in one hand while playing tennis on Memorial Day and suddenly she had the diagnosis of a brain tumor. She was in for intravenous steroids and to be seen for radiation therapy.

I had no idea where to start. What do you say to a 50-year-old woman



Samuel Potsubay '40 at his 50th reunion.



who has just learned of brain cancer? We helped each other along the way to a relationship that wasn't nearly as professional as a patient/doctor relationship should be. Oh, it had all the elements: my daily physical exam proved that her hand strength was slowly returning and my stethoscope kept up the guise of the physician (in training). But my doctoring was of a different kind. I was a constant in the whirlwind life of the hospital—someone just medical enough to give hope, yet nonmedical enough to listen to fear.

Marjorie needed a friendly face in the sea of strangers, and I needed someone who understood that I was just a student, someone patient enough to let me tap her knee three times before eliciting the reflex. She asked me about my family and about school. She told me about her family and their problems.

She did well for a short while, but was readmitted with progressive paralysis. I was on other clerkships, but still tried to stop in frequently. At first she wanted to show me that she was gaining strength, and so I would examine her. As it became clear that she was failing, even that vestige of the professional side of our patient/student relationship disappeared. I had become a friend, maybe a daughter, but certainly still a comforting constant.

She taught me, indirectly, the value of being that constant. With her I had hit the highs and lows. I had started thinking I had things in control, then I became overwhelmed with futility and my own uselessness. I ended by

remembering that time and good listening are a student's greatest contributions.

After Marjorie died I heard that her brain was to be presented during a neuropathology conference. I was encouraged to attend. The pathology was fascinating, I was told: unclear etiology of the paralysis. Great case.

During the ensuing months, I grew up a lot. I learned much medicine, and I no longer felt overwhelmed with the illness, the elderly, the house or the impossibility of the job. I formed many patient/student relationships, trying now to balance the medicine I was learning with the listening that is so important. I had learned to be more professional in my interactions, or at least I thought that I was being more professional.

My models had mostly been harried house staff, whose sleep deprivation and admitting schedules often resulted in brusqueness and rarely gave them the opportunity for listening. Sometimes it seemed that the only goal was efficiency, and the only means, a sort of shield that protected against hearing.

Gradually I became more confident in the medical sphere, no longer needing the security I found in a more personal side of patients. But I found I needed to relearn the patient/student relationship after being submerged in the medical details, and the relearning was somehow more difficult.

Mark had a 35-year-old body and three nonfunctional kidneys. I admit-

ted him early one evening for his last chance to get off dialysis—a second kidney transplant. He was upbeat and excited about his prospects. His was the fourth kidney transplant I'd seen in just over a week. I felt like I could see the procedure in my sleep, which was fortunate, since these kidneys never arrived at the hospital before 1:00 or 2:00 in the morning. It seemed routine, and I assumed that someone young and otherwise healthy would sail through the hospitalization. Looking back, I think that I treated him routinely.

Initially, Mark did well. His new kidney pumped out urine and his spirits remained high. I saw him three times a day, at 5:00 AM or so when I was pre-rounding, at 5:30 or 6:00 in the morning with the team, and again at 7:00 or 8:00 in the evening during "afternoon" rounds. I felt on top of his case; having already survived three transplants, I could now answer almost any quiz question about immunosuppression and the anatomy of the surgical procedure.

I had succeeded by the easy measures of a medical student's success. But I had forgotten the answers to the questions about complications. I had also set aside my earlier lesson that I could really best help a patient by being his constant and his listener.

Mark had a lot of belly pain and back pain a few days after his transplant. I still saw him three times a day—reporting to the team that he hadn't passed gas, that his pain was worsening, and that his amylase was



Kenneth Walker '50 and Henry D. Minot Jr. '50 talk while another alum listens in.

off the charts. But I never really stopped to talk with Mark. As his condition deteriorated into full-blown hemorrhagic pancreatitis, I struggled to understand the medicine, but didn't halt to hear his fears or listen to his grieving.

Eventually, he needed hours of emergent debridement in the OR. He had gained a kidney, but in the process he had lost his spleen, half his colon, and much of his pancreas. He was transferred to the ICU, where I could no longer follow his care in any meaningful way on a day-to-day basis.

I felt overwhelmed, like I was back at the beginning of the first clerkship, but without the strength of the patient/student relationships that I had had back then. Even though I now had a better understanding and fund of knowledge, I thought I had failed both myself and Mark. I hadn't been able to make a difference in his care. I hadn't been able to even out the lopsidedness in our relationship.

Mark actually beat the odds and went home with a functional kidney and a working colostomy, but with a body decades older.

Clerkships continued, and I learned good medicine and good patient care. When I was lucky, I had special patients, who gave me their gifts, and also let me give them mine. Fourth year brought new challenges: choosing a field, writing applications, deciding to get married.

The Patient/Doctor course lived on, meeting monthly over dinner now. The topics continued to be similar: health policy, ethics, sometimes even the literature of medicine. Creeping in came topics more and more pertinent to our struggles at hand: troubling cases, how to do more work with less time, the upcoming stresses of career choices and internship.

The class became applicable in a way that it hadn't been during the basic science years. I'm not sure if that's because we were closer to having patient/doctor relationships, because we transformed the course into one on patient/student relationships, or because the two are not as dissimilar as they sometimes seemed.

A sub-internship month is now required for graduation. As I prepared to do mine, I reflected over the past 15 months of clerkships, patients and lessons. I had many goals for the month: to do well, to take good care of my patients, to learn a lot of medicine. Contrary to popular belief, those three goals are not one and the same. I also wanted to listen in the midst of a busy

schedule, to convince myself that I would be able to hear my patients during the crazed life of an intern.

Jean was a 32-year-old Haitian man, who was admitted with interstitial pneumonia. After his wife had left the hospital for the night, I asked him about risk factors for HIV infection. He denied them all vigorously.

Jean spoke excellent English; he had moved to the United States seven years earlier and had started his own accounting firm. He and his wife had a



healthy two-year-old daughter. I explained to him that his pneumonia was serious, and that he would need to be in the hospital for more than just overnight. I tried to explain that we wanted to know what kind of pneumonia he had so that we could stop some of the medicine that was infusing into his forearm. I told him that we would need sputum for testing, and that we might even need to go on to a bronchoscopy. He understood and agreed, at least to the sputum.

The sputum was positive for pneumocysts. I had never told anyone he had AIDS before, but we had talked about AIDS a lot in Patient/Doctor. We had talked about giving bad news, and had even practiced doing it. In other clerkships it had been the intern bearing this sort of information; now, on my sub-internship, it was my job. I was the "doctor" for the first time.

Truly conversant with the medical issues in this straightforward case, I knew that I would be able to answer the patient's questions accurately, and that I could concentrate now on the actual telling and explaining. It was the time

for the patient/doctor relationship. In 15 months I had traveled a great distance: I had overcome my fears of imposing on my patients, my medical ignorance and my general ineptitude. I wasn't afraid of being perceived as "the medical student" any longer.

I went to Jean's room, aware of the weight of the news I would deliver, but full of good intentions and expectations. He became angry when I told him about the implications of the test result. He accused me of lying, of prejudice against Haitians. I tried to talk to him some more, but his reaction—understandable—was in the way.

I went back later, and again the next day. Jean remained angry. He refused to tell his wife, and refused my offers of help. He spent hours on the phone to Haiti, and when he was feeling better, he pulled out his IV and announced that he was leaving the hospital and going back to Haiti, where his mother would cure him as she had cured his two brothers who had similar pneumonias.

I had spent more hours trying to form a bond with this man than I had spent with many other patients combined. I failed, not because I was a medical student, but because I was a figure of medicine, someone giving news the patient couldn't accept or digest. The relationship we had, or the lack of it, was not a patient/student relationship; I had finally achieved a patient/doctor relationship.

Ironically, through it I discovered that the ideal relationship cannot be called up on demand. Maybe I had finally come of age.

Special bonds between patients and students are as common as they are between patients and doctors. The former begins under much duress—the student is more lost than the patient, and the patient becomes the expert. I often relied on my patients to lead the way. I have enjoyed the path-finding.

Each of these people—Rose, Marjorie, Mark and Jean—taught me something special about patient/student relationships and about patient/doctor relationships. As I enter my internship and embark on a lifetime of doctoring, I hope that my patients and I continue to share the compass, and that all of my patient/doctor relationships have a bit of the patient/student in them as well. □

Eileen Reynolds '90 is winner of the 1990 Harvard Medical Alumni Council's annual essay contest. She is now a resident in primary care at University of California/San Francisco.

REUNION REPORTS

60th Reunion

On June 8 and 9 the Class of '30 celebrated its 60th reunion, reviewing what had occurred in their lives and in the medical world since their graduation from HMS.

Well in advance of this date, a representative committee of the class, including Brendan Leahey, Benjamin Banks, Leo Blacklow, Edwin Cole, Arthur Hertig, Paul Hugenberger and myself, conferred with the medical alumni office and prepared a questionnaire for the class members to fill out. Thirty-seven replies were received, and the information was printed in the traditional red booklet, which was sent to each class member in May.

Meanwhile, the reunion committee, with the frequent assistance of the

Harvard alumni committee, arranged a formal reunion of the class in the Saltonstall Room of the 'Old' Harvard Club on Commonwealth Avenue between 12:00 and 3:00 PM on Saturday. Our ever-enthusiastic and internationally-known classmate, pathologist Arthur T. Hertig, agreed to be our chairman and toastmaster. In addition, on Friday two tables were provided for the class's annual meeting and luncheon of the Alumni Association.

The June 9th reunion was well attended by class members, their families and invited guests. Ron Arky, chief of endocrinology at Mt. Auburn Hospital and chairman of the Harvard Medical Peabody Society, and William V. McDermott, director of alumni relations, addressed the 24 members and wives of the class who were able to attend. Two students from the medical school were invited to come to the meeting and brought the greetings of

their classmates to the reunion class. McDermott presented a well-deserved award to Leo A. Blacklow, who was enthusiastically applauded. The meeting was then turned over to Hertig as the Class of '30's maitre d' and toastmaster, noting that he had recently received the Distinguished Pathological Award from the International Academy of Pathology at its March 1990 meeting in Boston.

Hertig presented his usual well-informed and appreciative comments concerning the accomplishments past and present of the members of the class during the last 60 years.

Those of us who attended this meeting agreed with the following poem:

Harvard Medical's sons who have spent
60 years of their life following Harvard's
educational bent
Are aging, you might say,
But continuing to enjoy every minute
of their work and play
In the many fields still being offered to
them today.
So to Harvard Medical School, we of
its Class of 1930 can truly say
We are glad we are both here today
Each offering medical help to all
concerned
In our own most prestigious way!

—Lewis S. Pilcher '30

Editor's note: We regret to add that on July 20, Arthur T. Hertig died. A memorial will follow in an upcoming issue.

55th Reunion

Twenty-one members of the Class of '35, accompanied by their wives, enjoyed most, if not all, of the events of our 55th reunion. Some of us attended the scientific symposia on Thursday morning and afternoon, with lunch in the splendid Medical Education Center



1930



1935

atrium. Thursday evening's dinner at Joseph's Aquarium was a chance to get reacquainted while eating, and eating, excellent food.

Alumni Day was sunny according to protocol and was most interesting. We were especially intrigued by Trelstad's talk, "Learning Pathology without Lectures with Robbins in a Box." It certainly put the responsibility for learning squarely on the student. Friday evening we had the pleasure, after dinner at the Copley Plaza, of hearing an address by Ron Arky, Charles S. Davidson Professor of Medicine and master of the Francis W. Peabody Society. He explained the New Pathway and the division of each class into five named societies, each with its own master and locus in the Medical Education Center.

Saturday morning we toured the Medical Education Center, guided by two delightful students, who were completing their first year. It seemed to

some of us that they might have benefited from a few lectures by the heads of the various departments, as we had from Hans Zinsser, Elliott Cutler, etc. Lunch in the Faculty Room, Building A, concluded a most enjoyable and memorable reunion.

Our class poet, David H. Clement, records it in the following verse:

The years now number fifty-five
Since some of us who still survive,
Departed from the HMS
Where we had clearly had the best.
Experiences are immense:
Some dull, exciting—even tense.
And here today we'll share a few;
You tell me and I'll tell you.
In medicine it's night to day;
The world has changed in that
same way.

Return we must—another five,
To see solutions! Let's all strive
To guarantee we'll be alive!

—Philip F. Partington '35

50th Reunion

Most often the 50-year reunion is the biggest; certainly for 1940 it was. We had 50 members of our class participate in some part of the celebration. Members came from Hawaii, Washington, Oregon, California, Texas and Florida. Many were at all the activities. Dave Greene was a discussant on a panel Thursday. That evening most of us gathered in the Minot Room for our first get-together—our best start ever! On Friday, Alumni Day, the business meeting, our group picture and the luncheon occupied most of our time. Later, many had a tour of the New Pathway teaching facilities. It must be a very exciting way to learn medicine.

Friday, dinner at the country club was superb. This was our first formal and informal meeting; formal in the sense we all (approximately 90) had an opportunity to interrelate, and informal in the spontaneous entertainment provided by some of our members. "Laura Lee" was well sung by Dave Greene, Steve Clement and Arch Deming—half of the original sextet. Bill White related tales of Vanderbilt Hall and other sundry incidences. Jack Morris brought down the house with his ballad "Where My Head Ought to Be," Dean Dan Federman gave us a very lucid description of the school's methods and goals. We appreciate his taking time to join us.

Saturday our architectural tour of Boston went well until blocked by a long parade of demonstrators. Lunch and a tour of the museum followed. Saturday evening dinner was at the Harvard Club. What happened? A flood from above descended a chandelier, blew a fuse, and dinner was finished in semi-darkness. This didn't disturb the performance of Wister Meigs' rendition of his "Chewing Gum Song."



1940

Following dinner we went to an adjoining room. Bernie Ryan described his hair-raising and heroic efforts on D Day—parachuting into Normandy to his recovery later from a penetrating chest wound, treated by our classmate Larry Kilham.

We adjourned about 9:15, all declaring it was a wonderful reunion. For those who came, some for the first time, for the daughters and one granddaughter who attended, the presence of the widows of Lem White and Fred Bartter—we all thank you.

For those who couldn't come for one reason or another, we spoke of you and missed you. It was a grand time!

—Rod Larcom '40

45th Reunion

HMS Class of '45 reunited in June to celebrate the 45th anniversary of its graduation. A good turnout of nearly 50 members of the class registered for one or more of the scheduled events, along with 40 spouses, children and friends. We began the happy process of reacquaintance, reminiscence, and updating on Thursday evening when 53 of us gathered in the Alumni Lounge in Building A for a cocktail reception. Two current HMS students joined us as reminders of the promise of *le temps*

wealth Avenue where we successfully recaptured much of the conviviality of our final class dinner at the Harvard Club 45 years ago.

Saturday afternoon we were guests of the Bullards at their spectacular home at Nonquitt near New Bedford for an outing and clambake, tennis and golf—a great day in spite of a passing downpour. Crapo and Kay and George Haydock had arranged an exceptional shore feast prepared on the beach by local experts and the Dartmouth Fire Department with clams, corn and lobster steamed in seaweed, and watermelon, served in a tent erected on the lawn. The house, gardens and beach are beautiful and the occasion was a great success. We are indebted to Crapo, Kay and George.

Those who attended the reunion are grateful also to Ed Friedman and Tom Fitzpatrick, who chaired the arrangements committee, and to Jack Parker, our reunion treasurer. Del Ames did a great job as editor of the class report. On to 1995!

—Isaac Taylor '45

40th Reunion

It was a wonderful reunion from start to finish! A few early birds zealously attended the scientific symposia on Thursday, prelude to the heartwarming 78 members and spouses who showed up in the evening for cocktails and din-



1945



ner, presided over by Frank Williams at Maison Robert in old City Hall. There a special tribute was paid to Warren Proudfoot in appreciation of his significant accomplishments, personal and professional.

Alumni Day on Friday—including the usual format of talks, lunch, class photo and milling around—was interesting and enjoyable as always. That evening about 57 of us wended our way to the beautiful house garden of Renee Gelman, who had graciously arranged a reception.

On Saturday morning 25 class members and spouses met in a case study room in the new MEC (Medical Education Center) for a panel discussion on “Roles for Physicians in the Future—Predictions and Prescriptions.” What was initially perceived as an opportunity to hear from classmates whose jobs require them to think about this subject, became an astonishing free-for-all, lasting two hours and breaking only for a scheduled lunch.

The panelists included Rufus Broadaway, chairman of the Joint Commission on Accreditation of Hospitals; Dick Egdaahl, an academic V.P. at Boston University and director of the Health Policy Institute at Boston University; Len Laster, chancellor of the University of Massachusetts Medical Center in Worcester; and Frank Williams, director of the National Institute of Aging. Brad Patterson was moderator. The discussion bounced off walls labelled “Commitment,”

“Managed Care,” “Freedom,” and “Political Action,” ending up so satisfying that to one of our physicians it was “almost a mystical experience,” and he wondered why he hadn’t come to reunions before.

Although there was no overt music, underneath and throughout one felt a marvelously gratifying spirit in coming together in these various ways. As we used to sing, “*Gaudeamus Igitur*.”

—Evelyn Davis Waitzhin '50

35th Reunion

The weekend began with a welcoming reception at the gracious Winchester home of Roman and Ruth DeSanctis, setting the tone for a gratifying class reunion—our best so far. Their generosity warrants special thanks. Friday’s daytime HMS activities were followed by a reception and elegant dinner at the Boston Harbor Hotel, and the get-together was capped by a great clam-bake at the beautiful home and grounds of Jerry and Patty Austen. Many thanks go to Ruth and Patty as hosts, and to Eleanor Shore for her editorial work on the reunion book.

We spent a moment of silence in memory of deceased classmates, and another moment in appreciation of the generosity of the class to HMS and the

Alumni Fund; more than a moment wishing that those who hadn’t made the reunion could have done so, but most of the time renewing those close bonds of friendship and fellowship that have helped fashion HMS '55 into a very special family. We look forward to the 40th!

—Mitchell Rabkin '55

30th Reunion

On Thursday of reunion week, 78 members and guests of the Class of 1960 met at the Union Club, a traditional establishment overlooking the Boston Common. We found, only mildly to our surprise, that the class had altered not only in avoirdupois and alopecia, but more subtly in contentment.

On Friday we met at the Quadrangle, listened to the speeches, basked in the sun, and posed for our ritualized photo on the steps of Building A. Then 50 of us dispersed to the Weekapaug Inn in Weekapaug, Rhode Island. What, you mean you never heard of it? It is a delightful, old New England inn on the water with excellent food, a wonderful ambiance, and no locks on any of the doors. (What does that say about location, clientele and staff?)

The class settled in Friday evening to a clam-bake on the premises. On Saturday there was tennis, golf, swimming and even a wedding—with a very special honey “moon” after the couple canoed out to their friendship sloop moored in the harbor.

That evening featured a sumptuous banquet, with wine by Replogle and a live band, eventually supplanted by our own Lennie Schulman serenading us with everything from “*Gaudeamus Igitur*” (including the better-known second verse) to dimly remembered excerpts from the second-year show. On Sunday more swimming, tennis, bumper pool (Bob Shirley’s newest passion), and bridge.

These comments do not capture the flavor of the weekend. What really happened was that people who had led separate lives for 30 years got together, talked freely about themselves and found that they really liked each other. They found that their classmates and spouses had mellowed, had become less frenetic and had learned how to listen as well as to talk. They found Harvard had truly been the tie that binds, and they realized that those who



1955

hadn't been able to come had been the losers, for the memories were precious ones. But, have no fear, there's always the 35th!

Attending all or a part of the festivities, to the best of our recollections, were: Joseph Barr, John Barrett, Peter Barrett, Joel Berne, George Bernier, Roger Bulger, John Bull, Richard Burtis, John Chacko, Ben Chaffey, David Challoner, Robert Dobrow, Lawrence Fishman, William Gallagher, Melvyn Gelch, William Green, Naomi Heller, Eric Jensen, Marshall Kaplan, Peter Kimball, Robert Kleiger, David Kurland, Phillip Leder, Caro Luhrs, Mark Perlroth, Daniel Pollen, Robert Prifty, Robert Replogle, William Rickles, John Ruef, Sirgay Sanger, Jane Schaller, Gordon Schwartz, David Segel, Robert Shirley, Leonard Shulman, Clayton Stenberg, Richard Thornton, Fred Valentine, Thomas Watt, Richard Wurtman.

—R. A. Kingsbury '60

25th Reunion

What a turnout! Having elected to remain in Boston for our entire reunion, we seemed to have enjoyed every minute of it. We began our 25th with a repeat performance in a different theater, of a splendid cocktail party hosted by Linda and Jim Wallace in their new

Cambridge home. This was the perfect setting in which to begin rekindling the sparks of our old friendships.

Thursday morning the scientific symposium was presented by a star-studded cast that included Marty Kagnoff, Gil Omenn, Mike Kuehl, Bruce Chabner and Clyde Crumpacker, who covered some of the highlights of research in genetics, oncology and infectious disease, followed by Al Rozycki, who delivered a most sensitive talk on

the care of hemophiliac patients with AIDS.

In the afternoon we were treated to a lively discussion on the changing face of medicine over the past 50 years. Classmates Hal Sox, Barry Levine, Ed Gilmore, Jack Babson, Harvey Clermont and Karen Kuehl—assisted by a representative of the 50-year class, David Greene, recent graduate Michael Myers, and special guest Nathan Seldon, a current student and son of our late classmate—spoke on perspectives in patient care.

By evening more than 70 of us—classmates, wives, and friends—gathered in the Alexander Parris room above Boston's picturesque Quincy Market for cocktails and a delicious gourmet dinner. The bonds of our old student fellowships were further strengthened, especially with Terry Langer, who joined us by phone.

Friday morning we convened on the Quadrangle to hear our classmates elucidate on the third member of that hallowed triad, teaching.

Friday night it was clear that progressively more classmates had returned to Boston, when over 90 of us paraded through the charming streets of the old North End from one dinner course to another, and even managed to take in a street festival between the entree and dessert.

Our bodies but not our spirits were dampened on Saturday when some 60 of us, now accompanied by a few of our offspring, boarded the boat for the



1960

final act, a real New England clambake on Thompson's Island. "All's well that ends well," with a rainbow, and yes, there was even a sunset for our cruise back to Rowe's Wharf.

Have any of us found the pot of gold? Maybe not quite in this day and age of changing medicine, but it became clear over the course of these convivial few days that after 25 years in the profession, most of us are feeling fulfilled and are happy with our choice of medicine as a career. If given the chance, we would most likely do it again, and at least a handful of us are delighted to have children following in our footsteps.

One other thing became clear: on Thursday afternoon Foster pointed out that the longer one looked at the speakers, the more they resembled their yearbook photos. After four wonderful days, the longer we were together, the more we realized that time has been good to us and neither our appearances nor our personalities have changed that much. Let us hope we can say the same after half a century. Vowing to verify it every five years until then, see you at the 30th!

—Lesley B. Heafitz '65

20th Reunion

HMS '70 had a successful 20th reunion. The reunion commenced with dinner at the Harvard Club on Thursday, June 7, during which there was a renewal of contacts with former classmates scattered nationwide. Joining us for the festivities were former Dean of Students Joseph Gardella and his wife, Elena; Hermann Lisco, professor *emeritus* of anatomy; and Robert Goldwyn, president-elect of the Alumni Council. Goldwyn's after-dinner discussion about the economic plight of HMS applicants, students and graduates stimulated considerable interest.

The following evening an intimate cocktail party was held at the Ritz Carlton Hotel. Saturday afternoon, the Gardellas graciously hosted 74 classmates, spouses and children at a clambake at their Weston home, featuring softball, swimming, etc. Their hospitality and beautiful estate capped our reunion.

Classmates attending included Cary Akins, Joe Albeck, Frank Anderson, Gerry Angoff, Elissa Arons, Mike Bennett, Ken Berv, Bill Bours (Ore-



15th Reunion

gon), Steve Colchamiro, Hunt Breed, Eric Bronfield, Peter Camfield (Halifax), Shan Crockett (CA), Tony Davies, Jean and John Emans, George Fareed (CA), Ed Folland, Jerry Frankel, Bob Fritz, Don Gerson, Joan Goldberg, Michael Good, Bill Goodman, Dave Greenblatt, Peter Gross (married six days), Jim Herzog, Tim Hopkins, Eileen Kahn, Mike Millis, Chick Oster (DC), Eric Ottesen (MD), Al Pearlman, Margie Peppercorn, Wendell Pierce, Derek Polonsky, Jim Rabb, Rose Marie (Stevens) Robertson (TN), Rich Robinson, Al Rosenfield (and 4-month-old child), Walt Rymzo, Jim Shelton (TX), Bob Thurer and Bill Wilkoff.

—John A.K. Davies '70

The Class of '75 assembled a small but enthusiastic group at its 15th reunion. The events saw the mingling of both classmates and their families.

After the traditional lunch on the Quadrangle, which followed Class Day activities, a class picture was taken, complete with the spouses and children of several classmates. These wholesome afternoon activities were followed by the more adult-oriented evening festivities at the Harvard Club, including a cocktail hour and dinner.





The Travel Program Of Alumni Flights Abroad



This is a private travel program especially planned for the alumni of Harvard, Yale, Princeton and certain other distinguished universities. Designed for the educated and intelligent traveler, it is specifically planned for the person who might normally prefer to travel independently, visiting distant lands and regions where it is advantageous to travel as a group. The itineraries follow a carefully planned pace which offers a more comprehensive and rewarding manner of travel, and the programs include great civilizations, beautiful scenery and important sights in diverse and interesting portions of the world:

TREASURES OF ANTIQUITY: The treasures of classical antiquity in Greece and Asia Minor and the Aegean Isles, from the actual ruins of Troy and the capital of the Hittites at Hattusas to the great city-states such as Athens and Sparta and to cities conquered by Alexander the Great (16 to 38 days). **VALLEY OF THE NILE:** An unusually careful survey of ancient Egypt that unfolds the art, the history and the achievements of one of the most remarkable civilizations the world has ever known (19 days). **MEDITERRANEAN ODYSSEY:** The sites of antiquity in the western Mediterranean, from Carthage and the Roman cities of North Africa to the surprising ancient Greek ruins on the island of Sicily, together with the island of Malta (23 days).

EXPEDITION TO NEW GUINEA: The primitive stone-age culture of Papua-New Guinea, from the spectacular Highlands to the tribes of the Sepik River and the Karawari, as well as the Baining tribes on the island of New Britain (22 days). The **SOUTH PACIFIC:** a magnificent journey through the "down under" world of New Zealand and Australia, including the Southern Alps, the New Zealand Fiords, Tasmania, the Great Barrier Reef, the Australian Outback, and a host of other sights. 28 days, plus optional visits to South Seas islands such as Fiji and Tahiti.

INDIA, CENTRAL ASIA AND THE HIMALAYAS: The romantic world of the Moghul Empire and a far-reaching group of sights, ranging from the Khyber Pass and the Taj Mahal to lavish forts and palaces and the snow-capped Himalayas of Kashmir and Nepal (26 or 31 days). **SOUTH OF BOMBAY:** The unique and different world of south India and Sri Lanka (Ceylon) that offers ancient civilizations and works of art, palaces and celebrated temples, historic cities, and magnificent beaches and lush tropical lagoons and canals (23 or 31 days).

THE ORIENT: The serene beauty of ancient and modern Japan explored in depth, together with the classic sights and civilizations of southeast Asia (30 days). **BEYOND THE JAVA SEA:** A different perspective of Asia, from headhunter villages in the jungle of Borneo and Batak tribal villages in Sumatra to the ancient civilizations of Ceylon and the thousand-year-old temples of central Java (34 days).

EAST AFRICA AND THE SEYCHELLES: A superb program of safaris in the great wilderness areas of Kenya and Tanzania and with the beautiful scenery and unusual birds and vegetation of the islands of the Seychelles (14 to 32 days).

DISCOVERIES IN THE SOUTH: An unusual program that offers cruising among the islands of the Galapagos, the jungle of the Amazon, and astonishing ancient civilizations of the Andes and the southern desert of Peru (12 to 36 days), and **SOUTH AMERICA,** which covers the continent from the ancient sites and Spanish colonial cities of the Andes to Buenos Aires, the spectacular Iguassu Falls, Rio de Janeiro, and the futuristic city of Brasilia (23 days).

In addition to these far-reaching surveys, there is a special program entitled "**EUROPE REVISITED,**" which is designed to offer a new perspective for those who have already visited Europe in the past and who are already familiar with the major cities such as London, Paris and Rome. Included are medieval and Roman sites and the civilizations, cuisine and vineyards of **BURGUNDY AND PROVENCE;** medieval towns and cities, ancient abbeys in the Pyrenees and the astonishing prehistoric cave art of **SOUTHWEST FRANCE;** the heritage of **NORTHERN ITALY,** with Milan, Lake Como, Verona, Mantua, Vicenza, the villas of Palladio, Padua, Bologna, Ravenna and Venice; a survey of the works of Rembrandt, Rubens, Van Dyck, Vermeer, Brueghel and other old masters, together with historic towns and cities in **HOLLAND AND FLANDERS;** and a series of unusual journeys to the heritage of **WALES, SCOTLAND AND ENGLAND.**

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